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## Criticon Febrium:

OR, A

### Critical ESSAY

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Descent in Committees

## FEVERS.

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Librum, cui Titulus CRITICON FEBRIUM, Dignum Censemus qui Imprimatur.

Johannes Bateman, Profes.

Sir Hans Sloane Bart.

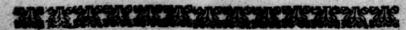
Guil. Gibbons,

Humph. Brooke,

Jacobus Ladd

Censores.

Datum in Comities Censories, 4<sup>to</sup>. Mensis Maij, 1716.





## Criticon Febrium:

# OR, A Critical ESSAY

## FEVERS;

WITH THE

of CURE, in all the different Species of them.

To which is prefix'd,

A Large INTRODUCTION concerning the Use and Abuse of the Mathematicks in Physick, and the Basis on which Indications are founded: Where also the Euodia Medicorum is annex'd.

By EDWARD STROTHER, M. D. A. Coll. Christ. Cantab. & Coll. Med. Lond. Reg.

The Second Edition, carefully Revis'd and Corrected, with Additions, and a large Inder.

#### LONDON,

Printed for CHARLES RIVINGTON, at the Bible and Crown in St. Paul's Church-yard. 1718.

## Criticon Tebrium:

## Origical ESSAY

LULLI ON

## FEVERS;

BHT HILM

DIAGNOSTICKS and METHODS of CURL, in all the different Species of them.

To whiteh is prefix'd,

A Lage INTROPUCTION concerning a rock of the Nathemarks in The Viathemarks in the District Indianal and the Bisses on which Indianal areas founded. There also she Kardia alternations is annex !!

By BOWARD STROTHER, M.D.
ACAL Christ. Commit. of Coll. Mad. Lond Res.

The Briefs Courses, earlieffe Rebigt and Coursells.

LONDON,

Printed for Charite Council on, at the Bible and Oran in School Charingand. 1718.





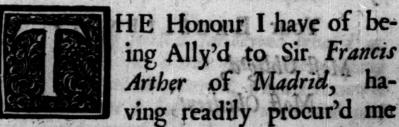
To His EXCELLENCY

## Don Isidro Casado

Of Azevedo and Rofales,

Marquis de Monteleon, Viscount of Alcazar Real, one of His Most Catholick Majesty's Supreme Council of the Indies, Gentleman of the Bed-Chamber, and his Plenipotentiary at London.

May it please Your EXCELLENCY!



your Excellency's Favour, I know not whether I am most to admire your A 3 Lordsbip's

#### The Dedication.

Lordship's Good-Humour or Friends ship to my Relation; since, as a Stranger, there were Grounds enough to have deferr'd complying to any Re-

quest 'till farther Inspection.

Should I presume to give any Encomium upon your Excellency's Good Parts, it would be somewhat extraordinary indeed, when I consider that You are sent hither as Plenipotentiary from the Court of His Most Catholick Majesty, where Wisdom and Politeness are distinguishing Characters, that August Assembly was always allow'd to inherit; and that You are deputed by It to transact the Assairs of that wise Nation, with the most sharp-sighted Court in the World. Therefore I shall only Crave Leave to subscribe my self,

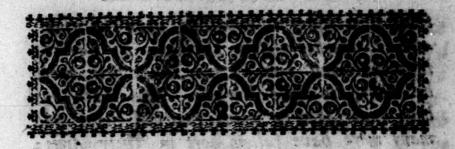
Your EXCELLENCY's

Most Oblig'd,

Moft Obedient,

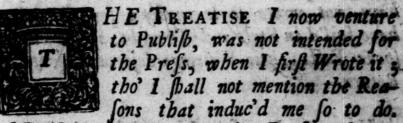
word and Most Humble Servant,

ring primbs or flow me I reduced to sort sort Edward Strother.



#### THE

## PREFACE.



If I advance Facts, and give Reasons for my Proceedure; if neither the Undertaker nor Publick, lose their Pains, nor think their Monies ill spent; that will be a sufficient Recompence for my Endeavours. If the World suffers not by me, I may, If Leisure allows, give them farther Proofs of my Well-wishes.

The Book is swell'd far beyond what I at first design'd; for I was not aware of many Circumstances which occurr'd, when I review'd my Papers: But I hope the Perusers will find their Account in what I advance, having endeavoured to say as little on every Paragraph as the Nature of the Subject would allow: For I did not think

#### The PREFACE.

think it necessary to expatiate upon the usual, and, I think, useless Divisions of Fevers; in which much Time, I fear, has been spent by many, to little Purpose. The Task has been undertaken by many Learned Pens, and many more have fallen short in their Aims; the former have eternized their Names, and obliged their Posterity with lasting Monuments, on which are engraven the Methods to be truly serviceable to Mankind; and the latter are not unworthy Thanks for their kind Endeavours, in communicating their Thoughts for the Publick Good, altho they have not wrote so learnedly; for the they have spoke Facts, their Writings deserve a grateful Return.

However, I am sure I have built the following Tract entirely upon many Years Observation; and they who will censure, may go scotfree; for I am not at leisure to return Answers to ungenerous Criticks, nor so obstinate as to persist in an Error, when I am once apprized of it.

The Language was the Choice of the Undertaker, not my own; and yet, I believe, 'twill fail of being serviceable to any who have not some competent Knowledge in the Materia Medica; this I had in View, to prevent too much medling in so grand a Concern, as is the Jewel of Life: And as the Circumstances of too many

#### The PREFACE.

many will not allow of a regular Attendance from the Beginning; so some Measures chalk'd out for the Use of those Gentlemen who were pleas'd to favour me with a Call, to their Patients Assistance, when the Disease was much advanc'd, will, I hope, give Sanstion to the Plainness of the Style. If it contain any Errata beyond the Literal, nothing can atome for it.

As far as I have had Opportunity to observe, more than the Third Part of Mankind fall by this dismal Distemper; and the little Leisure there is to amend any Mistakes, committed at the Commencement of a Fever, in all the subsequent Stadia, ought to make the Persons who Practise, seriously to consider what Sort of Evacuation ought first to be attempted, and how far the Strengths of the Patient will allow Them to be continued or reiterated: For to speak justly, on These depends the whole Art of Curing Fevers; and the Neglect, or Preposterous Use of Them, have convinced too many of the Truth of what I advance; since Alteratives produce their Effects but slowly.

I shall add no farther, than to tell you, that I have avoided to advance any Notion, which did not square with the Practice; nor any Practice, but what has all the necessary Distinctions, I could think of Use to assist the Judgments of those, whom Custom has prevailed to call first, in order to Prepare a Patient; which

#### The PREFACE.

is sufficient to denominate this Undertaking

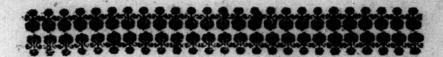
In this Second Edition, the Literal Faults, which were not few, I hope will be found to be carefully corrected: In the First Edition, I was totally a Stranger to Corrections of the Press, so that the Faults in it were the more pardonable; and moreover, I wanted Patience for such a Revisal: But now having carefully revis'd and amended it. I have left the other Task to such whose Business it is, and I doubt not but the Reader will be better satisfied.

In this Second Edition, I have also chang'd some, and omitted other Parts, to wit, where I found some Opinions were supposed to be too severely censur'd. I should have been far from thinking this wou'd have given a Handle to any Reproach; however, I have now avoided all Brangles, and may reasonably suppose I shall be no surther exposed to any Mat-Treatment. Where-ever I was obscure, I believe I have here made an Atonement for it; for I have added so much to such Paragraphs, as to take off all Handle for Cavils, and prevent Misapprehensions of 'em.



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#### THE

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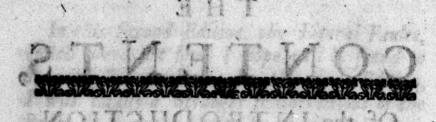
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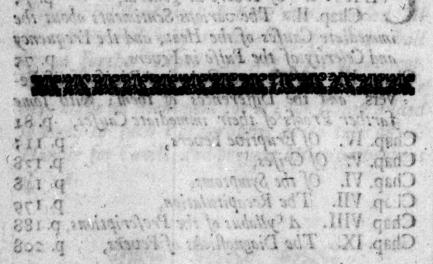




#### Of the Unfulness of the Mariema-ERRATA

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IN INTRODUCTION.

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#### INTRODUCTION.

### Strily Harve himself and his banily; the willy the strill on Triel on Tiol D. B. & Dry F.

Of the Usefulness of the MATHEMATICKS, to Humane Affairs.

WERE in vain to make Excursions, to endeavour to periwade the World to apply themselves to so useful a Study as the Mathematicks, since there is hardly any of the vilest of Trades which don't draw some

Rules from this Noble Science; thus Porters use their Cranes; Masons their Levers, Pulleys, Levels, and Rules; Carpenters their Measures; Ship-builders model their Ships in such a Form as they find proper for making 'em push their Way with the least Resistance. In fine, nothing falls under the Notion of Quantity, but what lies under the Direction of this Science; So that they, whose Education is liberal, ought to be fraught with so extensive a Knowledge, in order to make them useful to the State, their Families, and their Neighbours. However, I am not for perswading Gentlemen to apply themselves to this laborious Study, so as to fall in Love with it; and, by too intense an Applica-

tion, to turn Hermits, and render themselves unsit for common Conversation: Leave this to the Professors of it; but glean from them what is useful to your own Business, and leave the Remainder to themselves. And whenever you have learn'd what you would be Master of; remember, not to endeavour to extend your Part of the Knowledge to what it concerns not, nor to draw Conclusions pernici-

ous to Mankind from thence.

I would therefore have the Merchant perfect in his Numbers, and all the Parts of Arithmetick belonging to his Trade; for without it he must necesfarily starve himself and his Family; the Navigator, without his Trigonometry, is a forry Friend to his Merchant; the Esfayer, without his Specifick Gravity or the common Method of Effaying, is an Enemy to the State; the General Officer fails in one. of the useful Parts of his Duty, without the Art of Embattelling; the Gunner, if he is ignorant of the Elevation of his Piece, or does not know that Flanking is to a direct Shot, as 3 to 1, will not perform the Duty that is justly required of him from his General, nay, his Country. What does a Fortificator without the Knowledge of his Angles of Defence, but dupe his Prince, and expose his Subjects to Ruin and Destruction? What Value is the Miner of to his Master, who neither knows the Laws of Hydrostaticks as to Levelling, nor the Knowledge of Powers and Resistances as to Lifting? And therefore no Wonder so many are chous'd out of their Estates. What Acres of Ground do the poor Tenants pay for, which they never enjoy; whilst a Common Measurer encreases the Degrees in his Theodolite, to flatter his Gentleman into a Belief that he enjoys double the Number of Acres he really does, and to engross a few Pence into his own Pocket? How useful are the Arts of making and framing the feveral Sorts of Lens's, to discover the

#### The INTRODUCTION.

the Figures of Bodies, for the Short-fighted, for the Old, for the Sailor, and for many other Uses? Should L'expatiate more upon this Affair, a Chapter would swell into Volumes; which is foreign to my present Purpose, having no farther Defign in this Section than to hint at the Use of the Mathematicks in General; which I believe I have fuffici-ently done, when I have let you fee how many Affairs of great Moment 'tis absolutely necessary to,

### sile W. i.C. se to BEC. T. II.

Of the Use of the Mathematicks, and Experimental Philosophy, in the Knowledge of our Humane Bodies; and of some Data from the Several Branches thereof, drawn into Use.

AM not of so harsh a Disposition, as not to accept of feveral Data from the Mathematicians, which, it is to be own'd, are prettily enough adapted, by many, to the Purpoles they demonstrate them for: But I am of Opinion, that it is an affected Shew of Learning always to demonstrate these Truths in fuch a Manner, as that a Book of Phylick. fave its Title, should appear rather a Point of the Mathematicks discussed, than any useful Discovery in the Art of Healing. I shall here recite forme few of those Data, which need not be demonstrated, but supposed: And whosoever defires them proved in a Mathematical Manner, would do well to confult the Authors, they are borrow'd from, at their leifure Hours.

In every Fluid there is a Gravitation, and a lazeral Pressure, which is perpendicular to the Tangent of the Circle. Mexim

#### 4 The INTRODUCTION.

Hence 'tis concluded, that the Blood, in our Arteries and Veins, presses downwards and sidewise; or, as the learned Bellini has it, the Blood's Motion is Longitudinal and Latitudinal. From this lateral Pressure it happens that our Vessels are Circular; and as the Vessels are of that Form, all their Ramifications are of a similar Shape; and as the Glands are only Complications or Contorsions of Arteries, they are of the same Shape, and therefore also are their Orifices.

The Pressure of the Incumbent Fluid upon a Solid, is in Proportion to the Altitude; or, as Dr. Wallis will have it, The Moments of a Fluid pressing upon a Fund, are a Restangle under the Quantities of Matter and the pressive Velocity; which is Sir Isaac Newton's Law of Motion, That Moments are equal to a Restangle under the Celerity and Quantity of Matter.

Hence may it be concluded, that the Blood's producing any Effects on the Solids, such as the opening Obstructions in the Nerves, or elsewhere, must be an Argument of its Quantities being encreased, or its Pondus; of that it is stock'd with nimble Agents and volatile Salts: By either of which the Obstruction is dug down, and the Nerves are freed from their Infarctus. Hence also may be drawn the Reason of Hamorrhages, which, by the Quantity of Blood, either endanger a Rupture; or which, by the fwift and nimble Circulation of it, does equally, by its Intumescence or a Percussion, or some other Effect of its swift Motion, rend and tear the slender Orifices of the Vessels, and so occasion a Flux, which bears a Proportion to the Degree of its Motion. Or the greater the Quantity is, or the more fwiftly the Blood moves, the more dangerous are the Symptoms produc'd. 'Tis inferr'd from this Maxim,

Maxim, that Bodies plung'd under Water are confiderably more press'd upon, than in the Air; because Water is to Air as 800 to 1; and the Sea-water is heavier, by - Part according to Pere Thomas, than common Water. Hence 'tis observed, that the Cork will be press'd into the Bottle, when 'tis plac'd deep into the Sea.

Fluids running from a larger Syphon into a less, the Liquids run with a greater Velocity in the lesser Tube: But if the total Sum of the Orifices of the lesser Tubes be more numerous than the Area of the transverse Sections of the greater, then the Fluids run slower in the lesser Tubes.

Hence it is concluded, that it all the Orifices of the Capillary Arteries were (put together) less than that of the Aorta, the Blood would run faster in them than in the Aorta; the contrary of which is demonstrably true; and therefore the Blood circulates slower in the Capillaries than in the Aorta: And hence are so many Stagnations in the Evanescent or Capillary Arteries; which happen from the Cones growing narrower towards their Vertex, or, in other Terms, from the Arteries Straitness at their Anassometrs.

Fluids cannot move on, unless the impelling Forces conquer the Resistances.

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Hence if the Force of the Heart's Motion were not superior to all Impediments in the Arteries, and elsewhere, the Blood would stagnare, and run no longer. And Borelli has, in his Oeconomia Animalis, demonstrated that the Power of the Heart is to that Resistance, but as 1 to 45, or 3000 to 135000: and that were it not for some other Power, the Circulation must cease of course; which auxiliary Impulse.

B 3 pulse

pulse he places in the Percussion, or the Jerk and Shock it throws off its Load by; and fo we again return to the Law, that the Moment is a Rellangle under the Quantity of Matter and the Celerity; where there is a Defect in the former, it must be made up by an Encrease of the latter; or the Refistances wou'd remain stronger, and the Fluids

wou'd stagnate.

Thus when we labour under a Penury of Spirits in a Fever, the Crifpations of the Fibres will be augmented by the Heat of the Blood, and will occation the Impediment to Motion to be more manifest; and the Spirits flowing sparingly, through the Channels of the Nerves, will also lessen the Force of the Percussion; so that there must, in this Case, inevitably follow a full Stop to the Circulation, and the Thread of Life mult be cut off; if then these Powers are not equally proportion'd. many and dreadful are the Confequences of the Destruction of this Aguilibrium. en the down a conduction of

All Fluids flow through their Channels only with their Excess of Velocity above the Resistances.

So that let us suppose a Fluid to be impell'd with a Force equal to 47, and that the Reliffances are equal to 35, then the Fluid only moves on with

a Velocity equal to 12. for 47 — 35 = 12:

Hence in Cachexies, and other Diforders proceeding from the Languid and Testudineous Motion of the Blood; the Alteratives must be given to such a Proportion, as to augment the Motion, not only 'till it comes to an exact Aguilibrium with the Refistances, but till we make it arrive to that Excels of Velocity which the Nature of that Person, we have under our Care, has been known formerly to be accultom'd to, when he enjoy of a perfect Health. The Knowledge of this is gathered by collateral Proofs, the Discussion of which appetrains not to our pletent Enquiry. Hegyan

In all Fluids there is a Center of Gravity, and Gravitation, viz.

The Center of Gravity is an imaginary Axis, which is supposed to pass in a perpendicular Line

to the Bottom of the containing Vessel

So that whatever Posture we are under, the Particles of the Blood gravitate upon some Part of the Vessel: If our Posture is Erett, then the Gravitation is on the Orifices of the lower Vessels: If Horizontal, each Column gravitates by Lines perpendicular to Tangents to the Circular Sides of the Vessels. Hence in Hamorrhages of the Uterus an erect Posture contributes extremely to promote it; but an horizontal one helps to allay it: Thus, vice versa, in Hamorrhages of the Nose, an erect Posture is most convenient.

The Altitudes of Projectiles are to each other in a duplicate Ratio of their Velocities.

Suppose then that the Heart of any Person throws out its Contents to the Head, with a Velocity or Force equal to 2, and that another propels its Fluids with a Force equal to 3: I then conclude, that if the Blood of the one wou'd be thrown 4 Inches, that of the other wou'd be thrown 9 Inches forward. This I look upon to give Light to a Physician, in bleeding his Patients, in the Knowledge of the Force of the Heart, for where the Blood of one Person will flow to the Distance of one Yard and half, or 54 Inches, from the Arm into the Dish, the other flows only to the Distance of half a Yard and half quarter, or 22 Inches 2 From hence also may be gather'd the imminent Danger Patients are under in Ardent Fevers; where the Force, the Blood is thrown withal up to the Head, violently impacts it into the Corrical; nay, I have (in the Diffections of fuch as died under this Kind) found

it deeply thrust into the Callous Substance, and in a pretty large Quantity; from whence incurable Phrenzies must often ensue. From this Head, I would advise some unwary Practitioners not constantly to tread a Road, too common in Fevers, of giving teflaceous Medicines, nay, much warmer Cordials, and flaving their Patients with Numbers of Bliffers: when, if they confulted Reason, and not Prejudice. they would eafily view what Shoals they precipitated to the Grave by this Butchery. However, I would not here be so misunderstood, as if I cry'd down the judicious Use of these Medicines and Applications; because that would be acting against the Bent of common Sense; fince it will abundantly appear in the Treatife annex'd, that I have advis'd 'em, and even have endeavoured to encourage their Use at proper Seasons: but I am afraid their indiscriminate Administration and Application have not proved too satisfactory to the Advisers of 'em, nor fuccessful to the Patients, in some Cases and States nam'd below.

Of their Bases and Altitudes; that is, if the Base of one Cylinder be 9, and of another 6; and the Altitude of the one 4, and of the other 2; then are they to each other, as (4 × 9=) 36 to (6 × 2=)

Hence are the Quantities of Liquors, circulating in our Velfels, measur'd: Hence are the Quantities of Secretions proportion'd; for that it is easy (admitting there be no other Adventitious Cause, which I shall mention immediately) to believe that a greater Orisice will separate a greater Quantity, and even the most coherent Sort of Fluid in any given Time: For indeed I suppose the Celerity of the Blood's Motion to be determin'd; because when that is augmented, it alters the Question extremely.

Some will have it, that a greater Quantity of Blood, or a greater Celerity of its Motion, will occasion a larger Quantity of secreted Fluids: But others, who argue from stern and patient Enquiry, find that the larger is the Quantity of the Fluids, or the swifter is their Motion, beyond a certain Pitch. the less is separated. Who are the best Judges in this Dispute, will appear from this, that the one alledges Facts, and the other begs the Question. We may then suppose the Case to stand thus; as to the Quantity, that alone does not always encrease the Secretion; because we see that as the Bladder, over-diffended with Urine, cannot then perform its ordinary Duty, of Expulsion, by the Contraction of its Fibres; so may we say, in some Measure, of the Arteries, which are so over-loaden with a rarified Quantity of Contents, that they, in like Manner, cannot sufficiently contract themselves, nor, then, protrude their Contents through the ordinary Emisfaries; and consequently they do, at that Time, feparate less. This will be no Surprise to any who confiders, that whilft the Bladder retains its Elasticity and contractive Power, by this it contracts its Coats, and extrudes its Contents with Ease: because here the Elasticity is superior to the Refistances: But whenever the Refistances conquer this elastick Power of the Muscular Coat, then there necessarily follows a Suspension of that Action. Now in an Ischury (from this Cause) the Direction is fo alter'd that the Sides of the Bladder cannot act, because the Liquidum Nervorum and Arterial Blood, from whence this Power of Motion is derived, cannot now enter into the Bladder. And moreover, because in such a Case, the Pressure on the Sphincler is only equal to a Column of the Size of its Orifice, all the rest of the Fluid having now a different Center of Gravity. In like Manner, the Arteries will lose their Power of Contraction.

traction, and confequently of Protrusion. Nor will the Celerity of Motion alone contribute to augment this Secretion; because that, augmenting the Longitudinal and progressive Motion, weakens the Latitudinal; and consequently Secretion: Since the Glands are generally lateral, and plac'd at an Angle of 45 Deg. Nor will the Quantity and Celerity conjoin'd, promote the Secretions; because the progreffive Moments will be augmented thereby; and little Leisure will be given for dropping the Contents laterally. But because these Examples may not be fufficient to convince a prejudic'd Person, I shall mention an Experiment of injecting Fluids into a Syphon, which we suppose to be bor'd in several Places, to adequate the Cafe: If any Liquid is thrown with a violent Force into this Tube, very little or none will exude through the small Emiffaries, but 'tis all of it hurried along the larger and direct Orifice: For that the longitudinal Preffure here is much superior to the latitudinal one, (the only two Directions placed in Fluids.) However, when the Latitudinal becomes superior, the contrary happens; from whence it appears, that a determinate Aguilibrium is requisite to Secretions; and what is beyond this, then too much or none at all is fecern'd. But a Practitioner will be yet more convinced by Experiments drawn from Practice; which, for his Satisfaction, I shall stoop to do, and then draw this Paragraph to a Conclusion. Thus I have known it happen, that with opening a Vein, the Menfes have immediately return'd, and an Ischury, from bloody Urine Suppress'd, has been quickly reliev'd; which happy Changes either proceeded from the Diminution of the Quantity, or Celerity of the Circulating Mais, or of Both. As for the decreard Celerity, don't we see it very common in dying Perfons, where the Motion of the Blood is very flow, that the Lungs separate a great Quantity of Mucus noifim

into the Bronchia; which, so long as the Spirits are To plentiful as to contract the Parts, is thrown out; but whenever they fail, then it choaks them? Is it not a common Experiment to tie one of the Jugulars of a Dog, and we find immediately that his Saliva is fpued from the Salival Glands more plentifully? The fame Experiment made below the Heart, is found to fill the Cavities of the Body with a Load of Serum, which Dr. Lower looks upon as one Occasion of a Dropsy. The same Mechanism holds also true in Convulsions about the Head. where the Motion of the Blood through the Arteties is impeded by fuch a Diminution of their Diameters, as that they become thereby nearly obstructed: And hence, as a Sequel of this in these Parts, I have feen an Inundation from Serum in the Ventricles, which indeed may also Evene from the Return of it impeded through the Infundibulum. Catarrhs are often a Consequence of a flow Motion of the Lympha, or its Return hindred thro' the Lymphaticks. In fine, daily Experience convinces the Gentlemen of the Faculty, who have had Opportunity to observe Nature's Laws, that after we have been spent with profuse Evacuations of Blood, we are often infested with Dangerous Diarrbæa's, which are only the Effects of a loose Texture and a flow Motion, as well as of a Paucity of Spirits, so that the Fluids drop through their Glands where the Center of Gravity is directed downwards. fidewise, &c. Hence may the whole be affirmed, towit, that Determinate Degrees of Quantity, of Celerity, and of the Magnitude of Orifices as well as of Contraction, must contribute to Secretion; beyond or below which Degree, there is either no Secretion at all, or too much: But we shall enter into further Particulars of this Discourse in Pag. 26.

Canals that are impervious from any Extraneous Body, must, by strait ning their Alvei, be made to pass

sheir Fluids: If they are impervious by their Rapidity, soe must use Sluices to hinder their rapid Course; If they are impervious for the Want of Fluids, Sluices

also help this Fault.

How far this Maxim of the Hydrostaticks can be edapted to humane Bodies, I cannot certainly affirm; however, I shall deliver my Sentiments upon a Point or two, which it feems to account for, without offering to pronounce too dogmatically. The Ancients, in Fevers of the malignant Kind, have often advis'd Bole, Terra sigillata, and some such other Ryptick Drugs, in order, as they supposed, to contrast with the malignant Particles that had empoifon'd the Blood and Juices. I observe these very Medicines mentioned by later Practitioners, in their Books of Practice; and the Reasons they give for their Acting, is, as they are pleas'd to term it. To conglutinate the Crasis of the Blood, whose Compages is here supposed to be too loose; and from hence it is supposed to separate so easily into the Cutis, those Blotches, or whatever Eruption is made from the Blood. I said, I observ'd it had been mention'd in their Books; but if you confult their Files, you will rarely, if at all, find any Drug of that Nature blended with their other Medicines; which to me is an Argument, that when they write, they think themselves oblig'd to give Reasons to the Publick, they themselves are not fully fatisfied with. Give me leave to follow their Examples, in the Account I am going to give of the Virtues of these Stypticks, which yet I would gladly they should be persuafive, and introduce again what the Ancients had doubtless observ'd to be useful. Shall we look upon the Retention of some Parcels of the Perspirable, (which a Learned Author fays, is unequal in its Texture, and in Malignants calls it viscid) to be this extraneous Body? Let it for once be granted me; I say then, That such a

viscid should be attenuated to a sufficient Pitch for a critical Expulsion; it is necessary the Blood or Blood-Veffels should receive some Change in its Texture or their Oscillation, or some such probable Way. in order to bring this about. I cannot fee a more likely Method to compais this Defign, than by an eafie Supposition; and this I reckon to be done by changing the Diameters of the cylindrical Cones and Syphons into much narrower Limits. which we all know to be a Vertue ascrib'd to 4stringents; for by this very Mechanism, it will fall out that the Elastick Force of the Arteries will be encreas'd in a Ratio to a Diminution of the Diameters of these Cylinders; and whereas Tubes of a minute Diameter circulate their Fluids with a much greater Celerity than do those of larger Diameters, it may thus be reasonably supposed that the Elasticity of these Fibres being augmented, but their Diameters diminished; the Fluids, embrae'd between Fibres that have receiv'd fuch a double Change, will be more firongly compress'd, comminuted and agitated, as well as run on in a more continued Stream, and more nimbly than before, which to me, feems to be all that is requifite to hinder the feceding of fuch Eruptions, and to attenuate this Viscidity: As to what concerns the other Medicines commonly given in fuch Fevers, 'tis a Disquifition appettaining to another Head.

I remember to have heard, from a Lithotomist, somewhat, which then to me appear'd very paradoxical, That to make a Stone pass thro' the Ureters, he look'd upon Claret (which all of us know to be a Styptick) to be the best Diuretick, and what would make it pass the soonest. This Mechanism, you see, holds in cleaning Rivers from their Sand and other extraneous Bodies; whether it holds true in the Case of a Stone in the Kidneys, I shall not now take upon me to determine, but shall leave it to

#### 14 The INTRODUCTION.

the Enquiry of fuch who have Opportunity to observe.

Action and Reaction are equal.

This grand Maxim holds true in many Instances: Without this Aquilibrium the Blood would stagnate: for unless the restitutive Power of the Arteries in their Syftole were exactly equal to their usual Dilatability in their Diastole, the Fluids contain'd would be press'd into em so copiously, that the Blood would from at the Section of Refistance; and from thence at the nearest Section to that, up or down, to the very Heart, and fo occasion inevitable Death: which I take to be the Cafe in common Apoplexies, where the Laxity of the Fibres first suffers the Blood to lodge in the yielding Part, and from thence enfues gradually a Stop, till it can, for the Want of a free Passage, run no longer. By this Maxim, we find the Density of the Air to be reciprocal to its Compression; so that whilst the Compression encreases, the Density of the Air equally encreases; and, vice versa, whilst the Compression is taken off, the Air is less dense. Hence it might be inferr'd, that if the Moon afted on the Sea by Attraction or Gravitation, our Air would fuffer forme Change in its Action, and the Mercury would either rife or fall at fuch Times: But this, not being a certain Confequence, feems to happen, by Mr Boyle's Cosmical Qualities. Hence also the Air's Elasticity is reciprocal to its Extension; so that if we live in a lower Region, the Column of Air that prefles upon us, is much higher and heavier than when we live in mountainous Places, fo that they whose Lungs are ruptur'd, and who spit Blood, live measie where the Air preses the Vessels too much, and thus keeps the Fraction always open; but are help'd by a Removal into an Air less compress d, (avoiding any Extreme on this Side too:

And they who are Afthmatick, and want to have their Lungs more expanded, ought to live in a low and dry Region, somewhat inclinable to Cold. where the Air will be more compress'd, and their Breasts will be more opened. Hence we see, in the common Experiment of a Bladder, half inflated, and removed to a Mountain, how it expands and fwells. Hence 'tis that the internal Air (contain'd, I mean, in a Fluid) expands or contracts reciprocally, as the incumbent Atmosphere expands or contracts itself: Whence it is that Bottles in Hot Weather will crack; (nay, when the Air is drawn off, they will burst, tho' placed under the Water:) Because its Denfity in fuch Weather is much diminish'd. From this Quality of the Air, it happens that our Blood in Hot Weather occupies a greater Space, and occasions, in fuch a Season, Fits of an Asthma, Rheumatick Pains, Febrile Disorders, and such-like: Whence in Cold Weather, when the Air is much contracted and heavier, the Blood almost loses its Elasticity; because then Coagulations of dangerous Consequence often enfue. But having hinted at this Principle, I shall no add farther Remarks.

The Attraction of Bodies, is as the Squares of their Distances.

Hence at a greater Distance there is less of this Power exercised; at a less Distance it is greater: that is, if I suppose two Parcels of Salts; one at the Distance of 3 Inches from its Fellow; another at the Distance of 5 Inches; then as 9 is to 25, so is the Attractive Force of the one to the other.

Almighty God has plac'd a Magnetism in the World, and we find it, in some Measure, plain on several Heads: Hence, when such attractive Bodies are segregated at a tolerable Distance, they lose their Force of Attraction; but at small Distances they coalesce: Thus, Salt of Tartar flows by the Attraction

Attraction of Water, which is not eafily call'd off: But so much is said of this, in Mathematical Authors, and more especially in Sir Isaac Newton's Quare's, at the end of his Opticks, that little further need be spoke of it here. As to the Original Cause of it, he supposes it to proceed from some Impulse, or perhaps some unknown Way. If then any Difeases are occasioned by the Juxta-position of fuch Bodies as will unite into some Tertium Quid, and so bring on various Symptoms, the eafiest Method us'd for such Cohesions in Chymical Experiments, is, Dilution; and this is belt done by the Liquor heated, the Motion of which diffociates, whilst the Quantity enlarges the Distance of the attracting Salts. Hence it may not be amiss to observe a Caution which Baglivi (p. m. 474. de Morborum & Natura Analogi(mo) brings upon the Cafe of Rheumatick Pains; after due Evacuations, by Bleeding, after a cool Regimen of Barley and Oatmeal-waters, or Emulfions: He adds in the Declension; ubi Acuties tamen aliqua Morbi nec-non Acrimonia inflammatoria adbuc viget; tunc sumo Flavedinem subtilem Corticis Limonum in Frustula rejectum, eumque bullio leniter cum Aqua Fontis: & bujusmodi Aqua citrata calida prabeo bibendos agro tot Cyathos quot velit, dummodo possit Stomashus regere: Hac enim copiosa Potione refrano Salium Acrimoniam, Vires restauro & FLUXILES RED DO HUMORES, ut in fuis Filtris facilities citiusque repurgentur. Hanc Potionem Aque citrate frequenter prascribo - ut aliquot Cyathos ejusdem valde calida quotidie sorbeant. Hence Dr. Keil. in his Book of Secretions, observes, That Dilution diminishes the Attraction of the Salts in Rheumatisms, and hinders their Violence in acting and producing their racking Effects, when they approach too near to each other; notice the color right

Attraction

Thus it is in Hectical People, where the Acrimony and Salts in the Blood are so copious, and approach each other fo near, that they ravage and tear the Fibres, or at least irritate 'em so violently, that the Blood is hurried about one third fafter than in a natural Circulation; and consequently a vafter Expence of Spirits are required to propel it, in a Ratio to the Excess of Systole's in this preternatural Circle to the natural one; for I think it will not be denied me, that our daily Actions are the Standard of the Expence of Spirits; fo that their Exhaustion bears a proportion to the Quantity of Motion; and that Motion, to the Numbers of Contractions; whoever then can know how to hinder or separate the Contact of these Salts, hinders Irritation and all their other Effects, which we fee necessarily proceed from thence: Hence Dilution, in these Cases, is necessary in an absolute Sense. As to the other Correctives commonly given in these Cases, I don't design here to account for 'em, and therefore I shall proceed to another Point.

Motion in an inclin'd Plain, is doubly flower than in a perpendicular Line. The Celerity of Motion in one inclin'd Plain, is, to the Celerity of Motion in another inclin'd Plain of the same Altitude in a Ratio, reciprocal to that of their Lines: And a Body falling from an inclin'd Plain, the Velocity is equal. if the Descent be so. And an inclin'd Plain given, tis easily found bow far a Body would fall in the same Space from a Perpendicular of the same Altititude. For, as Dr. Wallis observes, Equal Bodies gravitate in Proportion to their Declivities. Hence the more inclin'd the Plain is, the less must be the Gravity of the descending Body, because we see that Obliquity weakens Gravity; fince it is certain, that Impulses are as the Sines of their Angles of Incidence: dence: Hence as Inclinations retard Descents: They must, vice versa, accelerate Ascents; because if the Inclination diminishes the Pondus, an equal Projective Force will push an equal Body obliquely upward with less Resistance and more Celerity, than if it were mov'd upward in a Perpendicular; in a Ratio to the Difference of their Angles; because the Difference of the Pressure or Motion upward Encreases as the Line the Body moves in approaches nearer to a Perpendicular. Hence abstra-Eting from Refistances, or allowing for 'em, these Lemma's may give us some Light to know the Quantity of the Circulation of the Blood in perpendicular Lines, or inclined Plains, by its own proper Weight, or by the Trusion of an Impelling Force; but the directer the Line is, the stronger must be the Protrusion; and therefore where the Fibres are made laxer than naturally, by any aqueous, oily, or fuch foft and uncluous Drugs. the Fibres in proportion, turn less direct, and the Circulation grows flower in the Vessels; and 'till the Exhalation of these Particles, by discutient or absorbing Medicines, the Blood must continue to move flower on, and we must be subject to all the Confequences that necessarily attend such a Change.

Heavier Bodies thrust lighter ones upwards: The Protrusion of Bodies less heavy, is so much the more vehement as the Dissimilitude of their Weights; (or the Protrudens and Protrusium are in a Ratio of their Pondus.)

I shall only add, that hence it is that the Mucus of the Nose swims at the Top of Water; that Rheumatick Blood swims upon the Cake; and that Bodies only gravitate with their Excess above the protruded Body.

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There is no Point of a visible Object, from whence Rays don't reach to all Parts of the Iris, and all Parts of an Object are Jeen: And, Rays emerging from a Glass Sphere, the Focus of such emerging Rays is at the Distance of three Semi-Diameters, and more.

From this it is concluded, that Spots and fuchlike Black Figures that feem to float in the Eye, are not really in the Humours, for that the Focus of the Representation of such Gnats, would, if at all, not converge but at a great Distance beyond the Retina, and therefore cannot appear at the Retina, and therefore are not noticed by the Eye: Hence it is concluded, that such Specks are really some Obstructions in the Retina, whence some Rays of the visible Object that are received, are not per-Pitcairn advanc'd This; which however was observed before by Galtruchius, p. m. 269. speaking from Aristotle, Thus, Sensibile positum Supra Sensum, non facit Sensationem: Quare, Tays Galtruchius, que sunt in Oculo, ab ipso Oculo non videntur-Quia si propiùs Objectum accedit ad Oculum Vertex Coni refracti projicitur ultra Retinam.

In a Cone, the greatest Resistance to Motion is at its Vertex.

Hence 'tis suppos'd that Obstructions most reafonably happen in the evanescent Arteries: this was advanc'd by Pit cairn; which has been also taken Notice of by Lindanus in Collegio Supra Hartmannum, p. 166. de Mesenterij Inflammatione, §. 2. & 3. who has these Words, Obstructio est metuenda ubi ex majori in minus Vas defentur: And hence it is that Tumours generally happen at the Terminus of some of the small Arteries.

accent to a certain De-

If the Blood be fo vitiated, as that the Strengths are augmented or dimininished, 'tis the same Thing,

as if the Blood offended in Quantity.

Hence, if a Person labours under a Want of Strength, from the Blood's being vitiated by some preternatural Ferment; 'tis the same thing as if the Blood were diminish'd and drawn off. And again; suppose a Person labours under a Disease where the Strengths are much augmented, as Madness, and fuch-like, from fome Acrimony of the Blood; 'tis the same thing as if the Blood were augmented. So that, suppose a Person has in his Vessels 20 Pounds of Blood, and the Strengths equivalate 5 Pounds; then if we confult Sir Isaac Newton's Law of Motion, it will stand thus, ac = m, or 20 multitiplied by 5, is equal to 100 fb. which this Perfon can lift. If then any one falls ill of Madness, and can lift up 140 th, then the Moment of Strength in each Pound of Blood, amounts to 7 th. for 20 multiplied by 7, is 140: But if they labour under fuch a Languor, as that they can only lift a Weight of 80 fb. then 20 multiplied by 4 is equal to 80 fb. and the Moment of their Strength is only equal to 4.

Secondly, Suppose the Blood were augmented to 28 fb, and the Moment of Strength of each Pound were equal to 5 tb; then 28 multiplied by 5 is equal to 140; fo that 20 multiplied by 7 is 140, and 28 by 5 is 140. Hence 'tis evident, that 'tis the fame thing, as to Strength, whether the Blood's Quantity be augmented, or its Quality vitiated. Hence it may be inferr'd, that if Madness be occafioned by some Acrimony of the Blood, and the Strengths of that Person be considerably augmented, we may all as if the Person labour'd under a Plenitude, by drawing off fuch a Quantity, as will lessen the Strengths of the Patient to a certain Degree; and this we may the more boldly attempt because 'tis agreeable to common Practice in such Cases: On the other hand, when the Strengths decay from some vitious Quality, it being the same thing as if so much Blood were lost, we may give Cordial Diet and Medicines to repair the loss of Spirits and Strength: But as for the State of Humours, on which this Decay originally depends, 'tis the Business of another Part to correct.

The Heat in our Body is in a Ratio compounded of the Quantity of Blood, and its Celerity, and the constituent Particles.

So that when we are under a Fever, and our Pulse is encreas'd in Numbers, our Blood is observ'd to mount the Thermometer up to Sultry, and this depends upon the Rarefaction and Attrition of the Particles amongst themselves. I am not now calling it into Question, whether some extraneous and active Particles don't give Rife to this Velocity, for nothing is mov'd but by some Agent: Hence, vice verfa, 'tis argued, that in the Cold Fits of an Ague, the Celerity, and confequently the Attrition against the Sides of the Veffels, are much leffen'd; which Iome extraneous Salts occasion, by clogging and impeding the Motion of the Blood: And here we find that the Dissilition of the Arteries is not reciprocal to the Resistance, (as Bellini somewhere expresses himself; ) for, in this Case, the Pulse grows weak and flow, (as Cole has it, p. 126. de Febr. Intermitt.) therefore the Systole bears a reciprocal Proportion to the Influx of the Animal Spirits into the Villi of the Heart, which, in fuch a Condition as the whole Fluids are then under, are very fcantily supply'd. This State of the Fever does not continue long, but is foon fucceeded by its contrary, Heat; which (as the above-named Bellini has it) happens, fo foon as the Pression, and the natural Force of Fire, to exert itself, iom. C 2

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that the Particles, by a repeated Circulation, are comminuted and divided into less Globuli, where the Salts begin to extricate themselves, and irritate the Villi of the whole Frame of the Heart and Arteries: And therefore to affift this Extrication the easier, and lessen the Cohenon, this necessary to follow the Caution once mentioned, in giving Liquous warm'd, to dilute, and strongly to destroy the Artraction; The more Haste we make in doing this, the better; for in the Cold Fits there is Danger of their never surviving it, where the Cause of this

Cohefion is strong and plentiful. Solution and all

The different Effects of Heat upon the Fibres of our Bodies, is somewhat remarkable; for a gentle. Warmth relaxes'em, whilft a strong one crispates and corrugates 'em; fo that in any Difeafe, where there is a Tenseness of the Fibres. (as Baglivi bbfetves justly there is in Frenzies.) Formentations of warm Emollients to the Hypochondria relax and help to give some Revulsion to the Humours from the Head; for that by fuch a Proceedure, the relax'd Fibres give an easier Inlet to the circulating Flaids, by so much as the Resistance to Motion is lessen'd! and thus the Blood that is not impacted, runs this ther with more Ease, and the distant Part is reliev'd. Tis upon this Principle of Relaxation, that Sylvins C. 9. de Morbis Infantum, advises the Feet to be bath'd in warm Milk, to prevent the Small-Pox's breaking out in the Face: 'Tis upon this Head too that we read in Verheyen de Febribus, p. 294. that Sir Kenelm Digby order'd a young Woman to rub one Side of the Face with Oil of Almonds and by it prevented any Marks from the Small-Pox for that the thore acuminated the Small-Fox are. the less they are observed to Mark and the Resistance to Motion, that Way, being much leffened, the Propulsion ad extra bore a Proportion to the EmolEmollition of the Fibres. This same Mechanism is observable in Critical Tumours, where the Part affected is rubb'd with Ot. Chamam. Lilior. Amygd. d. tum Lana succida iisdem Oleis imbut a. Vid. Schmitz.

p. 139.

We see then how the Excess of Heat crispates our Fibres, in Proportion to the Humidity exhal'd: so that in a violent Heat we see 'em change their Texture and Direction extremely, even to become incapable of passing their Fluids, and at last of holding their Contents in their Channels; so that how Instammations and Erosions happen, is pretty well accounted for. On the other hand, a gentle Warmth is useful to keep the Vessels slexile, and to cause 'em to yield up the smallest Impulse made on 'em by the approaching Fluids; and thus the Circulation is continued by their elastick and restitutive Force, which is the natural Office of the Arteries, contracting themselves after they have gently yielded to the Force impell'd on them by the Heart.

All Qualities are to each other as the Density of their Radij: And, This Density is reciprocally, as the Distance from the radiating Point; or, as the Squares

of their Radij.

Suppose two Circles; whatever is within the less, is more intensely heated than the Body contained on the Surface of the larger, in a duplicate Ratio to their Radij; so that, suppose the Surface of the lesser Circle has its Radius at the Distance of 4 Inches from the Radiating Point or Center, and the larger has its Radius at the Distance of 6 Inches; then, I say, the Body on the larger is heated as 36 to 16, which here is more than double: This Principle holds good in all Qualities, as Heat, Cold, Air, Light, Sound, Smells, nay, and Motion; so that even the Blood may safely be said to move on swifter at the Center of its Motion, the Heart, than at the Extremity of the Arteries and Veirs.

Veins, where there is the utmost Distance from its Radiating Point: But this being an Affair so much within the Reach of Common Sense, 'twould be an Obtrusion upon the Patience of the Reader to add more on this Head.

Effects are Aggregates or Rectangles under the

Sum of their Causes.

Hence, if we would account for any Effects produced in our Bodies, we must take a perfect View of all the Causes that can produce such Phenomena: Physicians ought, particularly, to be aware of too narrow Views in their Dissertations; for if we look into some of the Hypotheses they have settled, even in Practice, 'tis amazing to find such Men of Sense amusing themselves with Trisses, and leaving the serious Part of the Business either entirely out, or handling it so slightly, that it is very evident they study to raise a Reputation by an unintelligible Jargon; but that they have neglected the main Point, or Believe it sufficiently advanced by other

Hands.

By this Rule, whoever has a Mind to understand the Reason of Muscular Motion, must take a View of what is observable on a Muscle in Motion, that he may not be mistaken in accounting for it: We observe then, that a Muscle acting, grows shorter; That however its Surface is Equal; That its Æquilibrium is destroy'd; That its Power is greater and Swifter; That its Figure is chang'd; And that one Terminus is immoveable. The Change of Figure in a Muscle to Breadth, shortens it; but yet Experiments try'd by the Ingenious Dr. Connor, whilst I was one of his *Hearers*, convinced me that the Surface was the same. We need only consult Geometry, to know that a Change of Figure is no Argument of the Surface being chang'd too; fince to adequate one Parallelogram to another, there is a Propolition that the Squares of equal Lines are equal; and

and fince ocular Demonstration has convinc'd me of this, I find no Difficulty to Suppose it shorter, yet broader; fince what it doses in Length, it gains in Breadth. That the Hiquilibrium is defirey'd, is evident; for whilst one Muscle has no greater Addition of Force than another, the Muscle and its Antagonist are both at Rest. From this Principle, that Bodies plac'd at equal Angles from the Center, if these Bodies are equal, there is no Motion; but if you join any Weight to one of them, the stronger prefently makes an acute Angle with the Perpendicular. and moves, and the Aguilibrium is destroy'd. The Power is greater and swifter, in Proportion to the Distance of the Termini; for all Motion is varied in a Proportion of the Periphery or Radius to the Center: So that a Muscle doubly longer, will move a Weight as the Lengths fquar'd. Hence a Muscle 4 Inches long will move 16 Pounds, when a Muscle of 2 Inches long, only moves a Weight of 4 Pounds, if there be no other Cause that discriminates the Motion. The Figure is chang'd, for there would be no Motion without this Mechanism; I have observ'd above, that the Angles being equal, the Sides are also equal; but if the Sides shou'd continue unchang'd they would be at Rest. One End of the Muscle must be at Rest and fix'd; for whatever is mov'd is mov'd upon some Body at Rest: Hence the old Maxim of Archimedes, Give me Something to fix my Feet on, and I will move the Earth; Δος wế ςῷ, κ τῆν γῆν κινήσῷ. But whether this Motion is perform'd by a Contraction of the Venters to each Head, or by a Pondus drawing one Part upward, and another Pondus drawing the other Part downward, or by the Liquidum Nercorum entring and rarifying, and occasioning a contrary Nifus, and so enlarging the Area's of the Fibres of this Rhombus, or whether by a bare Contraction, I shall not now determine, leaving it to each Person to frame what Notion he pleases in this Matter. One

One thing cannot here be passid by in Silence: Dr. Cheyne having, in his Theory of Fevers, advanced, That the Flegm of the Stomach can be no Fomes to encrease the Fevers; because to enter the Lolleals, it ought to be much more attenuated than it is, and that a Sphere with a larger Diameter than the Orifice it is to pass through cannot enter; hence another Gentheman concludes. That Balfamicks cannot be useful in Confumptions, for that the Diameters of the Orifices of the Lattenis are too little to pais them: But whoever reflects on the valt Fermentation there is in the Stomach, may guess how much any thing taken in at the Mouth, may be comminuted and divided by the intelline Motion between the Heterogeneous Particles of Bodies, which we may grant here, if no where elfe! But if, according to Monsieur Chirac, we compute the Compression of the Muscles of the Abdomen and Diaphraem, and that of the Stomach it felf to be equivalent to 260000 the how easy is it to imagin the vast Comminution Bodies, taken down, must bear, and how much they must be attenuated, and how easily pass the Lasteals? Though I cannot believe that the Muscles have this whole Force he ascribes: It indeed they acted with a parallel Direction, somewhat might be faid; but the Obliquity of this Direction must make this a doubtful Hypothesis, as forme have demonstrated.

Secreted Liquors in our Eody differ in Degrees, of Cohesions, Fluidity and Quantity, and consequently in its Aggregate of Motion.

Mence, all Liquors can be separated through every Gland, if the Size of the Gland be but alter'd. Hence in Itterical People, where the Dullus Choledochus is obstructed, the Bile is seen to pass through the Kidneys, and appears in the Urine, as also in the Skin. The Laxity then of a Gland, putting a

Remora to Motion, will make the Fluid flop there? e're it can be fecreted hence that Humour feerhods will be less Fluid hence Opiates by relaxing make the Blood viscid; or the more complicated an Gland is the more viscid is the hard fetleted for that to many Plica are to many Refiftances to Motion; and the less Quantity of Fluids there are the flower is the Motion ; but the more viscid its fetreted Fluid is, the more is the Quantity of for that the Blood circulares in the less complicated Arreries, finding there the less Refistance) the Secreta, from thence are the more fluid; hence also the Celevity, Careris paribus, augments the fluid Secretions; but the flow Motion, the viscid ones. In short, the Quantity, the Celerity, and the Largeness of the Orifices, Cateris paribus, augment the Secretion of the more fluid Secreta; but the Want of Blood, the Stowners of its Motion, and Laxity of the Fibres, occasion all the Surreta to be more viscid. When therefore there is a depressed State of Blood, and the Motion is flow, we are obliged, in order to forward the Secretions, as well as change them, to administer all the volatile or ponderous Medicines to amend this Fault; and, on the other hand, where the State is too exalted and the Secretions too fluid, we life pede its Motion, and incraflate the Secreta by all the acid, watry, and cooling Drugs used on such Heads. As to the Quantity of the Secreta, it has hitherto been throughly believed that Santorius gave us an exact Detail of what Quantity of Perspinabile as well as sensible Evacuations were thrown off in a Day, till Dr. Floyer found the contrary in our Clime, by Experiments made for that End; 18 that instead of 50 3 (or 6 th.) in 32 Hours, the evident we only perspite about 7 or 8 Ounces, 600, at most in that Time, which is nearly equal (in the first Supposition) to what is exhal'd from an equal Surface of the Sea in our Clime in that Space.

Space. As to the Measure of the Perspirabile from the Surface of the Lungs in the same Time, I found it by a peculiar Contrivance, (I may have Leisure to mention somewhere,) to be ziiij. Dj. in our Clime. The Propulsion of the Blood through the Lungs (they being so near the Center of Motion), and the Varieties of the Air's Pressure being so immediately communicated to the Bronchia, as well as the Coldness of it, having so immediate an Insuence over its Secreta, and the Part being so momentous to Life; I am so far from being surptis'd at their Distempers, that I am amaz'd we shou'd not always suck in Death at this Port.

A Fluid of equal Velocity with another, but of a greater Gravity, gives a greater Idus than one with an equal Velocity and less Gravity.

Thus we see that, in Percutient Bodies, the greater the Pondur is, the greater is the Moment; so that the Islus is not from the Moles alone, but the specifick Gravity also: Hence if the Quellion turns upon Aperients, I look upon Volatiles, and Mercurials join'd, to be the most potent; for here you combine a ponderous Drug to one of a nimble Disposition; the two Requisites to make a strong Effort on the Fluids and the Solids too.

In Cones, the Resistance is least in their Axis: Newton Prop. 35. L. 2. Schol.

Hence 'tis concluded that the Motion of Fluids through Cylinders and Cones finds more Refrstance at the Sides of the Vessels than in the Middle; this is evident in the Channel of a River; hence the Blood is concluded to move faster in the Middle of the Arteries, than at their Sides: So that it is hence said, that the more viscid Parts are at the Sides of the Arteries; for that the Motion being slower there, and the Parts being more at Rest. Rest, the Fluids have more Leisure to cohere, and to become more viscid; the Viscidity being in a Reciprocal Ratio to the Celerity; the less Celerity the Fluids move on with, the more viscid must they be.

Stimuli move the Solids and Fluids; contrast and express the Fluids, and exagitate the whole Mass: They are perform'd by occasioning a mutual Action on the Solids and Fluids.

Whatever irritates, stimulates: Blisters are a notable Example of Stimulation. Where the Solids are put into frequenter Oscillations, the Fluids are hurried about by them with a greater Consusion; because in these we find very sensible Arguments to convince us that they enter the Blood, when we are oblig'd to have Recourse to Emulsions, and even Opiates or Campborates to allay the Dysuries they raise. Is it then reasonable in intense Fevers to apply 'em? Is it good Practice in Phrenzies? Are they indicated in the Vigour of Instammations? And yet how frequently do we meet with this Malpractice? But, Populus vult decipi, decipiatur.

Circles only touch in a Point; and a Sphere is touched by 12 equal Spheres in 12 Points only.

Whenever then a Body is spherical, and there is a Congeries of such Bodies, they touch each other in few Points; so that their Cohesion must be small: and consequently such Bodies will easily ascend by a small Impulse of the Fire. Hence 'tis agreed on, that Mercury being spherical, (or, as Gulielmini, Trattato di Fiumi, says, spheroidal,) it more easily ascends in Sublimation than some Bodies much lighter. Yet Doctor Friend observes very well, that if you mix Lead with Mercury, it ascends the easier; for that the Gravity by that Mixture

Mixture being diminish'd, the Surface is enlarged; and large Surfaces yield best to the Impulse. However, 'tis not difficult to adequate Gravity and Surface.

All Impulses all with their Excess of Power only,

above their Resistances. Et vice versa.

Hence let us suppose that any Agent acts with a Degree of Impulse equal to 6, and that the Resistance is equal to 4, then the Moment of Impulse is equal to 2, its Excess of Power. We may then conclude, that the greater Excess there is of Moment, it removes the Resistance the easier. Hence is it that Ruptures of the Blood-Vellels often happen from the too great Load of Blood, or the Plebora ad Vasa; and by a contrary Reason, it often happens that the Pulse intermits; because, as in the Case of Fat on the Auricle of the Heart, the Resistance is greater than can be conquer'd in one Pulsation by the Moment of the Instance of the Spirits. The same is said of any Pondus that hinders the Elevation of the Heart: But when such a Quantity of Spirits are in the Villi of the Heart, as are more than a Counter balance to this Resistance, then it re-circulates its resting Fluids.

Animal-Bodies are Porous: (ἐσπνοον κ) ἐκπνοον δλον τὸ σῶμα.)

Whoever consults Mr. Boyle on the Porosity of Bodies, will find that solid Bodies, and such as are considerably denser than any Species of Solid in humane Bodies, admit of Menstrua to penetrate them, such as Glass, Gold, Copper, Crucibles, Sand, &c. And therefore we can be at no Loss to conceive that the Pores, even of Bones, can imbibe Humidities, Humours, and even Mercury, if Authors observe justly. Hence in the Unction we find the Mercury as easily enter as Spirit of Wine; and therefore we may conclude the whole, with Hippocrates.

crates, that our Bodies have inspiratory Passages as well as expiratory ones, or it would be hard to imagine how Gold should turn white, when held in the Mouths of Persons under a Salivation, and that raised by the Unction; (which I mention, to prevent any objecting that the Mercurials given inwardly stick somewhere about the Jaws) but that the Gold attracts the Mercury lodged in the Blood.

Dissolvents are such, because of a Congruity of Pores, &c.

Hence, Refins are best dissolv'd in Sulphureous Bodies; Salts and Mucilages in Water; and Metals in Saline Bodies: But as Experience teaches us to know this, give me Leave to mention some few, out of many more behind; Turpentine, G. Hedere, Galbanum, Myrrh, Resin of Falap, Balsam of Pers, Balm of Gilead, and some distill'd Oils, are dissoluble in the Yolk of an Egg; Alkaheft Glauberi dissolves Ungula Alcis specifically; Oil of Annifeeds, Coral; Spirit of Nitre, Butter of Antimony; Spirit of Wine, Mercury Sublimate, all Oils, and Scammony; Antimony acts on Gold; Sal. Tartar, on Sulphur; Spirit of Nitre, on Bismuth; Sulphur, on Steel; Lead is wrought on, by Orpiment, into Shot: Spirit of Wine, with Sal. Tartar, diffolves Oils; Salt Armoniack acts on Brass; Salts melt better in Cellars, than at the House-top; Campbire corrects Cambarides ; Salt, or Acids, Antimony ; Mercury fublimate is diffoluble in Water. And Konig Regn. Mineral. fays the same of Arfenick, which is best corrected by Salt of Tartar ; Hellebore by Quinces, fays Antonius Ludovicus. Hence, whenever any extraneous Ferment is in the Stomach, or the Vessels, whoever affects to cure well, must make himself Master of the several specifical Dissolvents, as well as make the firiclest Enquiry into the Symptoms produced by them, that he may be able to diffinguish how he is to proceed. Salts

Salts alter according to the different Managements

of Them. Intow of to

Calcination makes Salts lixivial; Distillation gives us acid Salts; Putrefaction and Distillation afford us volatile ones; Coltion gives nitrous, armoniacal, faline, or tartareous ones. Now we may hence conclude, that Coction being the only Operation nearest to that perform'd in the Blood, or rather a Branch of Costion, I mean Digestion; we can have no other Salts fave these four last variously alter'd in their Texture. However, that other Salts are materially pre-existent in it; because the several Sorts of Salts mentioned can be rack'd from it by the Fire: the Acid Spirit of Ants got by Distillation, changes Blue Flowers into a Red, (as does Spirit of Sulphur;) and (like Spirit of Æs Viride) corrodes Lead or Iron. as I remember to have read somewhere in the Philosophical Transactions. Thus when we are assur'd, by the common Diagnosticks, that Salts affect the Blood, we must use proper and specifical Corrigents to one of these; the tartareous and nitrous give rise to the cold States of Blood; but the great Acrimony of the Salt (whether by our Diet or Medicine, or otherwise) occasions the exalted States: However, this being a Subject too copious for my present Purpose. I shall leave it to some more curious Enquirer, or 'till my Leisure will allow me farther Trials. I am apt to believe that our Lameness, in the Knowledge of the particular Natures of Salts. has hitherto made Physicians look upon Elephantiases to be incurable: Some of which, however, are not so, to such as know the true Method of specificating the Antidote.

Colours are produc'd mechanically, as are Odours, Tastes, &c.

colours are said to depend on their Salts: And to know the several Changes produc'd, we must be

be supposed to have some tolerable Skill in the Tinctorial Art; which at present I shall supply, in an Instance or two, from the industrious Mr. Boyle: Salt-petre and Salt colour Neat's-Tongues, red; Salt of Tartar boil'd in Milk, makes it grow red; which many look upon to be the Case in turning Chyle into Blood. A sulphureous Spirit of Benjamin mix'd with Sal Armon. turns also red, which illustrates Sanguification. But whoever would be knowing in these Matters, let them consult Mr. Boyle, &c.

Having said enough to convince any thinking Person how far this Manner of Reasoning is useful (if not abus'd) to Mankind; I have a Mind to annex some few Trials made on humane Blood, and some of the Secreta, which I have taken the Pains to collect for such whose Leisure allows them not to make so strict a Scrutiny; which at once will help our Knowledge in the Nature of the Blood, and give them some Insight into the Nature of Medicines.

Serum coagulates, on dropping into it Sublimate Water; by Sp. Salt, Oil of Vitriol, Sp. of Wine, and Oil of Tartar, per deliq; (so does Milk) by the Heat of Fire, by Allum, by several Tintlures made of Spirit of Wine, and with Tintlures of Steel made with Acids.

It remains fluid with Spirit of Salt Armoniack, with Volatile Salts and Spirits, and most Tinctures made with Acrimonious Plants, and with Tinctures of Steel (with Tartar.)

Blood coagulates with Oil of Vitriol, with Acids, with Allum, with Spirit of Wine, Cinnamon-Water, distill'd Vinegar. And though it coagulates by it self when let out, yet it congeals sooner with the following; by Extrast of Sully Juices of Hemlock,

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Alchymilla, Bistort; by Lixivial Salts of Tamarisc, Rosemary, Pulegium, and of Thime. But these latter I doubt of.

It remains fluid, with Sp. C. C. Ol. Tartar. Sp. Sal. Armon. Sal. Absinth. Cort. Peruvian. Pulv. or Tincture; with Juices of Lavender, Sage, Thea (made) Wormwood, Bawm, Succory. Tansy; with Lixivial Salts of Eruca, Artimisia, Shepherd's Purse.

Saliva drops a Sediment with Lixivial Salts.

Chyle and Lympha coagulate with Spir. Vini, Vitriol, with Heat, with the Air; with Oil of Vitriol.

Chyle and Lympha remain fluid, with Motion, with volatile and fix'd Salts.

Bile coagulates with Sp. Vin. restific. Oil of Tartar. per deliq, Crude Allum, Tinsture of Cantharides, Cinnamon Water, Sp. Nitri, Sp. Vitriol, Aqua fortis, Vinegar, White-wine, Fair Water; Sp. C.C. Sp. Salis, and with Oil of Tartar. Nitrat.

Bile remains fluid, with Sea-Salt Vitriolum Martis, Salt Armoniack, and Sal. Absinth.

Altho' I allow that this Manner of Reasoning is Polite, and am of an Opinion that the Theory of Physick is much advanc'd by it; I am, however, far from encouraging such refin'd Reasoning, where I find it contradicts Experience; for as Physick is founded on this Basis primarily, we ought to square our Reasoning to Facts, and never to deny Them, because we cannot adapt 'em to our Reasoning. I shall annex an Example or two, to illustrate my Meaning, and then shall proceed to the true Basis, to-wit, Facts and Experience.

There is one Gentleman, who was however otherwife

wife very Deferving that has reason'd too much à Priore in his C. 3. of a Consumption: His Argument stands thus from Data in his Propositions; From any Suppression, arises a Plethora; from a Plenitude, arises a Relaxation of the Fibres; from a Relaxation of the Fibres, arises a flow Motion of the Blood; from a flow Motion of the Fluids, arises a mucous and viscid State of Blood; from this Viscidity, arises a Paucity of Spirits; from this Penury, arifes an Incapacity of Dilatation of the Thorax, (and a Want of sufficient Air to compress;) from this Ineptitude to Dilatation, arises a Stagnation; from a Stagnation, arises an Inflammation; lastly, from an Inflammation, arises an Ulcer, or a confirm'd Consumption. And he draws his Indications from this manner of Reasoning, thus; Hence, says he, the Humours must be render'd more fluid, the Fibres made tenfer, and the Phlegm evacuated; fo that we must attenuate, contract, and evacuate. As for Balfamicks, he looks upon them as useless; only they are Stomachicks, if mix'd with Salts. Let us confult some Authorities upon so nice a Point; and then I shall reason from Experience in a very different Manner. Barbette uses in a Confumption Opiates, Spirit of Salt, and cooling Things, and advises to forbear Purgatives: And Dekkens, upon him, adds Pettoral Decottions and Decottions of Colewort, with Sugar of Refes. Sylvius advises Gum-Arabick, Roots of Althea, Liquorice, Comfrey, Leaves of Althan, Mallows, &c. the four Cold Seeds, Quince-Seeds, Almonds, Barley, Opium, Juice of Liquorice, all fat Earths, and fuch like. Etmuller gives Milk, Spaw-Waters, Opiates, &c. Morton prescribes Milk, Spaw-Waters, Opiates, Smooth Pettorals, and thin Diet, as also oleous and mucilaginous Medicines. Sennertus advises Hume-Clants and Refrigerants, such as check the febrile Temper, also smooth Medicines, Butter unfalted, Milk, and fuch like. Nicholas Pifo advises Snails, and

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and Snail-water, Milk especially, with smooth and mucilaginous Medicines. Hieronymus Cardanus praises Oil of Vitriol in Water of Maiden-bair. Lucas Tozzi commends Storax and Cynoglofs Pills. Borellus praises Butter of Woman's Milk, as a Secret. Valescus de Tarenta commends Pulvis Halv. Rhasis, Asses Milk. Platerus advises Sugar of Roses; fo does Valeriola. Riverius prescribes Milk as the best Remedy, and such as will answer all Intentions; as also Medicines that repress the Hectick, to-wit, Coolers, &c Willis advises Flowers of the great Daifie, Snails, Liquorice, Milk, Shavings of Ivory, Hartsborn and China in Decottions. Mayern fays the Acrimony of the Humours is to be obtunded. the Febrile Heat is to be temper'd, and Milk is to be used. Chesneau advises a Decottion of China, Lungwort, and Milk. Horflius corrects the Acrimony. and ules Opiates.

I have taken the Pains to bring fuch a Crowd of Authorities, to the End that Practice and Notion might co-incide; because whoever would be a just Practitioner, must go backwards in his Reasoning: And therefore fince I find, by fuch good and grave Men, Confumptions treated in a very contrary Manner, 'tis my Part to Submit to their Judgments, where I have not sufficiently experienc'd the contrary: Let us then fee how, upon fo folid a Bafts as the Experience of Ancient and Modern Learning, we can draw a different Conclusion from this Theoretical Gentleman. I fay then, that any Suppression may occasion a Plethora; that a Plenitude makes the Politions of the Vessels to be more direct; from this Tenfion and directer Polition, arises a swifter Motion of the Blood; from the Motion encreas'd, arises a Fluidity and Tenuity of the Blood and Juices; from this Fluidity, arises a larger Secretion of Spirits; from the Quantity of the Spirits, arife irregular Excursions of 'em into particular Parts:

Parts; from this, arises a Crispation of the Fibres: from this, arises an Inflexibility of the Thorax: from the small Motion of the Thorax, arises a Stagnation; from the Impediment put to the Motion of the Blood, an Obstruction of the evanescent Arteries: from an Obstruction there, arises an Inflammation; and lastly, from this, arises an Abscess, and an Ulcer of the Lungs: So that Evacuation is requir'd; after which Relaxants, Incrassants, and such as clog the Hurry of the Motion; fasting from too spirituous a Diet; Opiates, oleous and mucilaginous Medicines, gentle Aperients of the Cooler kind, Bleeding and Balfamicks, are all the Requifites in a Confumption; which, whoever has either read or practis'd, must be too sufficiently appriz'd of, to need any farther faid on this Point.

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Mention shall here be made of an Inference made by Dr. Pitcairn, in his Oration to the University; atter having made use of Arguments to shew us, that Objects in the Eve could not be observed on the Retina. he proceeds, and tells us, that fince it was evident to a Demonstration, that those Bodies that appear'd before our Eyes had not their Abode where it was commonly suppos'd, then it could not be agreeable to right Reason to apply Collyria to dissipate what had no Being, and concludes them useless. This, I conceive, (with Deference to the Manes of so great a Man) was a Conclusion too hastily drawn; for let us suppose that these Specks are so many Impediments to the Reception of the Visual Rays, and that they are a Consequence of some Fibrils of the Retina, being bung'd up and obstructed by some Viscidity, or external Compression: Is it not certain that the Coats of the Eye, are the Expansions of the Dura and Pia Mater, and that the Retina is the Medullar Part of the Brain? Is it not daily and good Practice to order external Stimulants to Palfied . . . . D 3

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Nerves in other Parts of the Body? Is it not certain (at least ex concess) that these are so many partial Palsies of the Retina, as there appear Specks? Is it not certain that a total Palsie of the Retina is a Gutta Serena? Is it not certain that the nearer we approach to the Part affected, the better Effects will the Medicines produce? We may then, I think, safely conclude, that Collyria well adapted are so far from being useless, that they are necessary to stimulate the Coats of the Eye affected, in order to occasion a brisker Oscillation in the Fibres of the Part, and so to assist the shaking off of the Obstruction; and consequently when this is done, the Specks will appear no more.

A Critick is an unwelcome Guest; and if my Design had been to find fault, out of an Itch of Satyrism only, I should deserve Returns made me: but the Good of Mankind being my soleAim; and the Treatises mentioned being Works produced by the Labour of Men of Value and Reputation in their Professions; I consider that such great Examples may missead the rest of the inferior World into miserable and wretched Mis-managements: because the the Inventors of such Reasonings can (by their Sagacity)

yet such as trust to their Demonstrations, cannot.

From what is said, I would advise all Practitioners to avoid begging the Question, and affirming any thing contrary to known Experience: I would have 'em proceed with Reason, back'd by Experience, the only Props a Physician can rely on.

in Practice correct their own Mistakes pro Re Nata;

the Karma, having bong a up on addressed by former visiting, or external Commodition: 48-in not cortain that the Control of the Expeditions of the Local and that the Expeditions of the Matter and that the Kalma is not Medicilar Part of the Brain? Is it not daily and good Prastica to order external oriminants to Palife.)

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Nerves

# SECT. III.

#### Whence Indications are drawn.

T Hinted above, that nothing could Indicate, but I what was somewhere fix'd in or on our Bodies; for that External Procatarctick Causes did not always all on us as they might; and that however if they did, they did not always produce such Effects in us, as Conjecture had dictated; and that therefore, to know what Effects they did produce, we were obliged to have recourfe to Observations taken from the deprav'd Functions of our Organs, the Preternatural Change in the Qualities of our Fluids and Solids, and the Retentions and Evacuations of our Fluids. I would not have Physicians terrify'd from an Enquiry into these permanent Effects; for that Mr Boyle has affirm'd, that the Causes of Difeases are not yet assign'd, Philos. Experimental. On the contrary, with the Leave of fo great a Man, I don't find but that they are; and whoever confiders what I am about to advance, will be fenfible they already are: However, the Diagnosticks of such Effetts are not thoroughly ascertain'd, nor ever will. You will pardon my confounding the Words Effects and Cau-Ses; but I say, with Mercurialis de Morbis Pueror. l. 1. p. m. 13. Morbus dupliciter spectatur; Morbus ut Causa, suos babet Effectus; ut Effectus, suas babet Caufas.

I shall begin with Plenitudes; and I take them in an extensive Sense, not as a Plenitude ad Vasa and ad Vires only; but where-ever there is any particular Repletion, any Stagnation, any Compression of and from Humours, I look upon them all to require the same Mechanism in their Cure; because, Quod Plenum est, evacuari debet. Galen. I. 1. Aphor. Comment. 23. Martin. Wendelinus, I. 3. Axiom Medic. Axiomat. 780. So that where-ever a Part of

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the Whole is loaden with a Quantity of Fluids we must there evacuate. This holds true in external Cases, as well as internal; for in Gangreens, where the Part is diffended by Humours, and there is an Impossibility to re-circulate the stagnating Blood, we must Scarify, to evacuate the Plenitude; which being taken off, the Remainder, in the Part beyond and below the inflam'd Member, begins to obey the Motion of the propelling Impetus; and (if no great Alteration is produc'd in the Part) 'tis after this Method eafily amended. So if we discover the Head to be overloaden with Humours, as is commonly evident, when 'tis nagn approv, narappianou and xwuarwo'ss, according to Hollerius and Duretus. we are then to consider whether this Repletion be from a pure or an impure Plethora, and we must accordingly fuit our Evacuations. We must then say, that there are two Sorts of Evacuations, to-wit, Inftrumental and Medicinal: To the first are referr'd the Paracentesis or Apertion, in any Sense: To the latter, all the Stimuli, which not only have an Effect on the Stomach and Intestines, but also on the Vessels and fectetory Ducks; so that the Shock and Irritation give an Uneafiness to the Glands, and squeeze em, by their acrimonious Parts, to Evacuations; as does the accidental Shock given to several of the Viscera, when, for Example, an Emetick taken, opens Obstructions in the Gall-Bladder, and shakes off the Load of Phlegm from the Bronchia in Asthma's: To this Head is referr'd Riding in Asthmatick Consumptions; for, to speak the Truth, Dr. Sydenham can mean no Other, when he advises Riding in fuch as are even much spent. My Bounds will not allow me to expatiate farther on this Head at present.

An Atrophy is an Opposite to Plenitudes; and I would be understood to take this in as large a Sense as I have done That in the former Paragraph; so

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that where-ever there is any Defect of Juices in General or in Particular, the Business of a Physician is, to apply some amicable Specificks, in order to restore the Want; where no Evacuations can take Place, but only fuch Alterations as are of the fame Nature with the Juice or Fluid to be fupply'd. So that here we are suppos'd to be Masters of the Nature of fuch Juices, or we can never act the Part of a Physician, in amending we know not what. I would not, however, be understood to ask an Impossibility of any Agent; and therefore fince there are several of the Fluids in Humane Bodies, whose Natures we are very unsensible of, à priori; because they fall not under the common Method of Experiment, fuch the Spirits are; yet 'tis enough for a Praditioner to know the Nature of 'em, à posteriori; and fince we find them recruited by certain nimble Agents, we are, however, look'd upon to be sufficiently appriz'd of the Nature of Them, when we administer such as Experience has found out, by a patient Series of Trials to supply 'em; fo that when they are wanting, we give all the Cordial Medicines, such are volatile Spirits, Aromaticks, and volatile Oils, which are given in fuch Quantities as may fupply, but not add any Exotick Quality that may contrast with another Contra-indicating Cause: Thus the Semen is supply'd with such Particles as answer its double Nature of Mucilage and Acrimony; hence we give Oysters, Pepper and Milk, Spanish Wines and Yolks of Eggs, Chocolate, and fuchlike Drugs. The Defect of Ferment in the Stomach, is supply'd with Mucilages and Acids join'd; such are Elixir of Vitriol, warm Jelly, and fuch-like. As to Old Age, whoever fall under a Decay of Spirits, are properly Old; and therefore that mighty Ens Melissa of Mr. Le Febure's can be no otherwise serviceable, than that it is a great Restorative of the Spirits; which, however, I leave to every Man to iudge 7316

judge whether it will do the Feats they pretend. The Difficulty of Supplying the deficient Fluids is not so great a Secret as is the Discovery of such Defects; which, if Time allows me, I shall endea-

vour to illustrate, in a proper Season.

The Blood is often stock'd with Exotick Qualities, which constitute the different States of Blood, and which Justice has been done to, by the Ingenious and Laborious Dr. Floyer: In the depress'd States of Blood, where our Heat is below the Standard, if there is a Lentor, all the Bitters, Aromaticks, fixt and volatile Salts are indicated, Chalybeates are good, Mercurials are here proper too; and Riding is profitable. I here would Remark one Thing, because I have often found Practitioners in some Mistake about it. When Pains seize a Patient and wander about the Body, but yet have no Heat along with them, but what is Natural, or where the Pains are not plainly Convulfive, I have feen difinal Confequences from Bleeding frequently in this Case; for that Dropsies ensu'd upon it. and they have only chang'd a less Disorder into a much greater. If these Gentlemen would but give themselves the Leisure to reflect, that the Blood being fluggish, and resting at the Capillaries, gives rife to these Pains; they would then judge, that volatile Medicines would cure the Patient very eafilv. and fave them their Reputation.

If the Blood is Sour, by Diet, Medicines, or the Retention of any Humour which ought to have been thrown out of the Body; we must give the Alcalines of all Sorts, whether testaceous, fix'd or volatiles Chalybeates, and whatever will tob the Blood of this obstinate Guest, which generally attends Hypochondriack Persons. 'Tis yet an easier Task to the Undertaker, when the External Causes have four'd the Mass and Spirits, than when the Passions of the Mind have deprav'd them; because it is ea-

fier to deny them what is hurtful for them, and forbear to give them such Fare, than to bridle an irregular Paffion, which attacks them unfeen and when alone; and it would not be easy to conceive how an invisible Form should fo disturb Matter.

if it did not occur in daily Practice.

When our Blood is too Serous and Fluid, all Absorbents of the Testaceous Kind are useful, Ceruss of Antimony, Diophoreticks and Diureticks, Bitters, Petasitis, Guaiacum, Sassafras, Juniper-Wood, Mustard-Seed, Horse-Radish, Putv. Æthiop. and fuchlike, are proper to correct the too Watrish and Lax States of Blood, and carry them off by the Pores of

the Skin or Kidneys.

Wind is the produce of all vitiated States, it is carried off by the most powerful Inciders, fuch as volatile and oily Salts, Aromaticks in Powders, Infusions, Waters, and Oils, Ginger or Castor in Wine. If the Wind is rais'd from an Acid State of Blood. the State from whence it is produc'd being hard to get rid of, the Wind, arifing from the Fermentation of that Humour in the Stomach, is also difficult to cure. I remember a Lady of Note, who, for a confiderable time, had been troubled with a Swelling or rather a Fulness at her Stomach, which she could not be cur'd of by her Physician in Ordinary; upon Application to me, I did believe it was Wind, and proceeded in fuch a Method, for fix Weeks, as I judg'd might have been effectual; but to my Surprize, at the Expiration of that Space the was as full of Complaints as at first: By the Obstinacy of the Disease, I had just Reason to sufpect that this was an Acid Wind, if I may to term it, and therefore I gave her Antimonium Diaphoreticum in Juleps, which in a Fortnight's Time perfectly reliev'd her, and she return'd very well satisfy'd, Spirit of Acres Is a good

I must here remark once for all, That all Saline States, whether acid, nitrous salino sulphureous, (six'd or volatile) or any Species whatever of Acid ones, are cur'd, as Bohnius observes, by Terreous, Testaceous, Gritty, and Martial Drugs, alcaliz'd Salts whether urinous or six'd, by Aromaticks and Bitters; but any Species of Salines, by oily, watry, mucilaginous and gelatinous Medicines: So that if we are ignorant of the peculiar Nature of the Salt offending in the Mass, yet we are not at a loss to be doing somewhat to the Purpose, 'till some Chance lets us into this Secret.

Hence, when we labour under Diseases that can be ascrib'd to any one or more of these Heads, we must follow the Rules that are hinted at below, in

the Euodia Medicorum.

If the Blood be botter than it should naturally be, fo that the Laborants are always Helical, by having their Pulsations more numerous in a Minute than they should, along with a preternatural Heat in their Bodies, but most perceptible in the Palms of the Hands and the Soles of their Feet; then we are to consider whether the fix'd or volatile Salts teign most, or whether the volatile Acid is predominant; not that I suppose them really such, but I speak ad Apparentiam; because we find by daily Experience, that Acids amend the one Sort of the hot State of the Blood, and gentle Absorbents, as Pearl, Coral, Crabs-eyes and such-like, are profitable in the other: But, as I observed above, in both, the Diluents, &c. agree.

As to the Flatus produc'd by these hot States, as they are from a more volatile Cause, so are they more impetuous in their Effects. We suppose Convulsions, Mania's, Vertigo's, Incubi, and such-like Disorders to proceed from this Wind; we therefore give, in such Cases, Opiates to repress them; and even in some Cases, Spirit of Niter is a good Medicine:

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But 'tis enough to have hinted at these States in so short an Essay. If we are guilty of that Ignorance which Etmuller (Annotation. Practic. ad Institut. Medic. Physiolog. p. 82.") stoops to acknowledge: I cannot fay how far this Advice squares with Reason. fince Patience and Vigilance perhaps would better

ferve the Turn.

Fevers are the Destroying Angel of Mankind; and a thorough Knowledge of them, is a complete System of Physick. They Ape a Plenitude, in that they are not cured but by Evacuation, and the Medicines us'd in their several Species are but Preparatives to fit them for Expulsion. But I speak chiefly with a Reference to a precedent Concoction shew'd in the Urine after the State, whose dropping a regular Sediment (by which I exclude the Epgy avalelapayusvov, and the coosaous xpyuvoions) is a good Sign, if it continues steddily so. I shall not expatiate here farther than to divide them into a Causus, and a Hellical or Malignane Kind. If the Blood boils, (pardon the Term,) and over-bears extravagantly, let the Time of the Fever be what it will, nay, let it be what Sort of Fever you pleafe, (always excepting a Plague, you are oblig'd to give the Cooling and Diluting Diet and Medicines to allay the Fever, by disjoining the Salts; fuch are Barley-water, Juice of Limons, Gas Sulphuris, Sp. Vitriol, Sp. Nitri dulcis, Emulsions (unmix'd with Acids, for fear of Precipitation,) and fuch-like. You ought not only to ascertain the Nature of the Medicines which alter this Hurry; but you are oblig'd also to be careful to fix on what Degree and Quantity you must not exceed. In which Affair I believe a Thermometer might be of Use, supposing we knew what was their Degree of Heat whilst in perfeet Health; othewise Experience only can be your standard Rule. I have binted at this, in order to warn the Young Gentlemen of the Faculty to keep in

Mind, that in all Fevers (still excepting the Plague) you must reduce them as near to the natural Heat (they us'd to be of when in Health) as you can, and keep them to it so long as 'till the Fever is dismis'd through some Emissary. Whenever the Fever is of fuch a Species, that the Blood moves on too flowly, respectively speaking; we then are oblig'd to theer another Course, and in Proportion to the Degree of the defettive Ebullition, we must advance it by all the Testaceous, Bitter, Fetid, fix'd or volatile Medicines, internally administer'd, or externally applied, till it arrive at a certain Standard. fitted for Expulsion; the Ignorance of which is the Bane of the Patient, and an Opprobrium to the Phyfician. In this Species then, Coral Crabs-eyes Pearl. Serpentaria Virginiana, (with Bole, &c.) volatile Salts, and the like, are to be given Internally; and Blifters and Suppedance Externally, are prescrib'd. But I shall annex a short Explication of Hippocrates's Aphorism 29. Sect. 2. and bid adjeu to this copious Subject: \* Incipientibus, says he, Morbis, si quid movendum videtur, move; vigentibus autem, quiscere melius est. (Where there are any Signs of a Turgescence,) as where the Humours [oelsoi] run imperuously and are like to fix upon any noble Visrus; where there is a Tenuity and Separation, where there is any Malignity or Pestilence, and where the Humours are plentiful); then Evacuazions are requir d: Only remember that such Purgatives are not to be given, in any Time of the Fever as may produce Effects beyond the Canal of the Stomach and Intellines. The Rationale of which is so obvious to every Thinking Person, that I need not annex it. You fee I have chalk'd out the Rea-

<sup>\* &#</sup>x27;Apro Suwy Tan verwy. by or Sonen Rivery, Rive anua-Zerar 3. nouxilu Exer Beation est.

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fon why I have always excepted the Plague, from the Management above-named: But I shall add, that where the Humours, in fuch a Difease, are fo thin that they will not cohere, the Spirits are in the utmost Danger of Evaporation; as in the contrary State, where the Humours and Blood cohere so violently, that they are immediately render'd incapable to obey the Propulsion of the Heart, there is no leifure for Preparatives, and the Limits of our Choice are wonderfully narrowed; so that the Proceedure must of Course be hasty, and the Humours are best expell'd with specifical Diaphoretics, by the Consent of all Ages. As to the Particular Fevers, they are all terminated Criticando, (to use Cornax's Term:) So that each Place has its particular Port for Evacuation; the Head, by Hemorrhages; the Vessels, by Sweat; the Uterus, by the Menstrua, &c.

The Discovery of the Bark of Peru has furnished us with an Indication which never was answer'd fully 'till its Appearance; which I may call a Period, though I mean the Remission of that Period only. So that not only Intermissions of Agues, and the Remissions of Putrids, but also Periodical Disorders, such as Convulsions, Dry Asthma's and Epilepsies, receive Advantage by the administration of this Drug; as do all Evacuations of Humours that depend upon a Febrile Ferment, such are Hamopioe's, the immoderate Flux of the Menses, and such-like. But this being so undoubted and known a Truth, I shall

proceed to another Head.

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As the Laws of Circulation now stand, we often are obliged to have regard to the Hurry of the Humours, (abstracting from all other Considerations,) with a wrong Determination. Where they flow with Violence to any particular Part, so as to endanger the Patient's Life immediately; as we see it happens

pens in all Sorts of Irritations, as in Pains, Coughs. Eruptions, Convulsions, Diarrhæa's, and such-like. In all Instammatory Obstructions, as Pleurisies, Ophthalmia's, &c. In every Anomaly, as Retreating Gouts, Irches repell'd, &c. In Insalubrious Meta. Rases, &c. In all these, and such-like, one constant Indication is, turning the Current of the Motion to an opposite Goal, which is done by the proper Stimuli applied or administer'd according to the following Standard, viz. by an universal or a particular Revulsion; for when the Motion offends in a violent Manner, the larger Vessels are to be opened on the contrary Side, and the other general Revulsives are to be used; but when the Motion is in some Measure allay'd, Derivation (or Revulsion to a near, though contrary Part) is sufficient; and when the Humour flows in no more, but is impacted in the Part, we must then use particular Evacuation (fuch is opening the Vein of the Forehead, in a Pain of the Fore-part of the Head.) As to the Number of Ways this can be done; as to the Causes of this vitiated Motion of our Fluids; as to the particular and specifick Stimuli; as to the contra-indicated Revulfives; as to the Seafons of using Revulfives; as to the Rules and Seasons of particular Evacuations; I hope 'tis not expected I should now detail them.

There is an opposite Fault in our Fluids to what I come from mentioning; and that is, they frequently are defective in their Motion, and suppress'd, (Quiete & Motu intermisso, peccant Humores.) This the Ancients call'd a Defect of the Expulsive Faculty. I shall not enter upon the particular Causes of this Want of Irritation: but shall content my self to mention the general Methods of remedying this Rest, which is always perform'd by Irritation. But as each Part has some Conditions annex'd to produce this Change, so one Specifick, here, will not serve

ferve the Turn; but in Aftriction, all faline, bitter, and other Encoproticks are required. In a Retention of the Urine, the different Species of Diureticks are to be given, and the Continent Caufe is always to be remov'd by a Catheter. In an babitual Vomiting Suppress'd, give gentle Emeticks, or what will carry it downwards. In a Suppression of a Spitting from the Lungs, all the inciding Pettorals are useful, such as G. Ammon. Flor. Benzoin. Extrast. Croc. Milleped. Tinttur. Sulphuris, &c. In a Suppression of the Menses or Lochia, give Emmenagogues. In the Hamorrhoids suppressed, use the irritating Glandes; nay, sometimes gentle Causticks are to be rubb'd on, as Fig-Leaves, &c. In Ulcers suppress'd, use Cauflicks, Blifters, &c. near the Place, as also Nettling. &c. This I look on to be fufficient to give us a Notion of this Head; and therefore I draw my

Hand from off the Board. A series of the series

There is yet one Thing remains unmentioned. and that is an Adhesion of Humours to a Part: And as it proceeds from this, that whenever any viscid Particles, expos'd to the Air, lose hourly more of their Humidity, and hereupon turn into a Crust at last; so they are never loosen'd without the oleaginous Medicaments. This holds true in our Earwax sticking close to the Meatus Auditorius. where, by Injections of oily and emollient Medi-cines, 'tis at last loosen'd, and thrown out. So it often happens in dry Constitutions that the Faces stick close to the Plica of the Intestines, which are safeliest loosen'd by oily Medicines (by the Mouth and Anus.) This is yet most of all remarkable in the Lungs, where the violent Adhesion of the vifcous Phlegm requires a vast Force and frequent Impulses to shake it off from the Fibres it strongly adheres to, and which is not in this Case promoted one lota by any Inciding Medicines in the whole Materia Medico; nay, it were well if I could

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could say they did no Prejudice in this Sort of Adhesion; but if they take plentifully of the city Lindus's, they will glib the Orifices, and, by lessening the Adhesion, the Spit, which before fatigu'd the Patient almost to Death, obeys each Shock of the Breast and Lungs, and comes easily up

Having thus, in thort, given you a Sketchvot the Indicants that naturally arise from the Confideration of the Fluid Parts, I shall proceed to give you a Detail on them in the Confident and Solid Parts!

Though it be a great Truth that the confifient Parts only are vitiated secondarily from the Visio in the Fluids, yet it is not my Business here todispute how the Parts come to be affected by such depraved Julies, for that Physicians are never called on to prevent such beginning Vitiations; and therefore I shall here only consider them as already bred.

When any of the Mouths of the Vellets are opened, or even enoded there arises an Indication to make use of all the Styptick or agalutinative Medicines, and, if external, of Cathereticks, to thut and contract, or crifpate the Orifices. Whatever Medicines have not some one of these Powers, their Operation then is only accidental: So that Gabseyes or (which are more porous, and more effectually work, as they are fpecifically lighter), burnt-Hartshorns can only curb a Diarrhaa, as they abforb the Humidities or Acidities that occasion this Irritation and Evacuation. Having follow'd the Advice of a great Man in using a Suffitus of Calx viva on Vinegar in an Hamoproe, (where all Medicines prov'd ineffectual, and where the Stream was to copious, that immediate Death must have been usher'd in by it,) with a furprizing Success; I begun to make Enquiry whether the Steams were not somewhat Catherevick, or what other Quality it acted by; I found that there was a Stypticity, when Lime and Water were permitted to evapobino

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rate into a Recipient. And as to the Vinegar, there can be no Question how much its Spirit, though diluted with its Phlegm, is ftyptick: However, I can hardly believe but that the Ebullition had finarcht up some few Particles of the Lime it felf, which made it fo immediately fuccefsful. If I am ask'd how Riverius's Mixture of Sal. Absinth and Succ. Limon.; as also how Opiates, and several other Arcanal made Use of in Evacuations, produce their Effects, if the above named should has they do often) fail? I shall answer 'em, That Diseases seldom are the fame in Individuals, and that I am now only mentioning Indications separated and abstracted from any complex Idea, and I leave each Person to his Reason to guide him in the Necessity of the Choice if you son it is not very disassed it is

It fornetimes happens that Fat or fome fleshy Substance, such as Polypi in the Heart or Arteries, bung up the Paffages irremediably; for where they are External, if Discussients and Emollients fail of their Effect, Corroding Medicines, or the Knife, or Fire, will eradicate them; which, however, are fafeliest neglected where they are affix'd to any Tendon or great Artery: So the Cauda Equina and Tentigo in Women are either dispersed; or, if more fix'd, then Burnt-Allom or Ægyptiacum are good, or the Knife is us'd (which is more eafily done, to the Timorous, by a Horse-hair ty'd a-round it.) If Far stops the Circulation about the Heart, the only Relief, which is very finall, is knocking the Breaft after a full Inspiration. Forestus commends in a Sarcoma of the Testis, Ciner. Sermentac. Nitr. ag. imbut. & induct. L. 26. Obf. 18.

If the Parts unite which ought naturally to be difjoined, we must take a short View how far they are remediable. I remember to have seen a Child which I was call'd to, who pass'd the Meconium through the Vagina, the Anus being impersorated;

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I began to confider whether the intestinal Dull was continued to the Foramen, or whether it terminated at the usual Place of Perforation, which I look'd upon to be the Cynosura, to determine me: As far as I remember, I believ'd the Sphindler terminated at the Anus, and I did accordingly give the Surgeon Directions to observe narrowly whether the Aperture might not be made there: What was done I never had a fecond Opportunity to observe. But I must add, that whereas it is commonly said (without any Restriction) that such an Imperforation is not to be medled withal; I must beg leave to diffent from those Gentlemen; for if the Sphin-Her terminates at the Anus, and the Canal be no Part of it, nothing can be fafelier attempted; and if it be a Part of it, yet it is not very difficult to contrive an easy Method how to accomplish the Task; which I shall mention, if ever I have farther Leifure to put my Papers into Order. Under this Head, the Adhesion of the Lungs to the Pleura is to be confider'd, which can be remedy'd, if not too strong, by the violent Motion of the Arms, and Breaft, strong Expirations, and oily Medicines internally; unless you are willing to follow Hippocrates his Advice in the Matter, in opening at the Point of Adhesion, and by thrusting in a Pipe, to which a Bladder is fix'd, and blowing up this Bladder, in order to destroy the Coalescence: But having hinted at this, I shall pass to another Paragraph.

An Atonia, or a Laxity, is the Basis of many Disorders, as the learned Basivi has sufficiently made out in his L. de Fibra Motrice, 'tis reliev'd by all the Aromatick and Styptick Drugs; the suffice of which evaporate the Humidities, whilst the others contract the Fibres into a narrower Compass: Tis upon this Head, that Biondi's Pills have been found a mighty Secret in the Vertigo: 'Tis for this

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# The INTRODUCTION.

same Reason, that the Tindura Luna is so useful in the Lofs of Memory: So in the Relaxation of the Phrenick Nerve, we find Stypticks advis'd, and even an Injection of them after Section. The Laxity of the Glands of the Uterus in the Fluor Albus is reliev'd by the abovenamed Medicines. The Turks, after their Bastonading, find Alcanet a sovereign Remedy. If a Softness of the Junture of the Sutures in Children remains long after the Birth, 'tis amended by Aromaticks, Sulphur, and Nitre. In a Tympany (which I take to be the Hydrops Epiploicus, and which I have upon Diffection feen, where the Danger is in spilling the Contents into the Cavity of the Abdomen, which then turns it to an Ascites; for as a Vomica is less dangerous than an original Phthisis, because the Cystis, the Matter is contain'd in, is between the Lungs and the Pus; fo a Tympanites is less sudden than an Ascites, where the Tunicks of the Omentum keep the Lymph from immediately affecting the Viscera); in a Tympany, I fay, to hinder this Effusion, we find Vitriolum Martis commended internally, as also Spir. Sal. Coagulat. in Aq. Ceraf. nig. C; and externally, cool Fomentations of Nitre, and fuch like; we also find Lusitanus, L. 2. Obs. 48. commending the Spaw's near Liege, which, whether he means the Savinir or Pauhont, have a Stypticity in them as they are Chalybeate; and modern Experience instructs us that our Tunbridge Waters are useful in this lax Habit, which disposes to a Dropsy. But enough of This.

The next Head is Obstructions, which was us'd (to any who has been vers'd in reading the Ancients) to be the Afylum in all unknown Distempers; and to fay the Truth, modern Physicians fall little short of the same Fargon. It is own'd to be the commonest Cause of these Disorders, but not the only. The feveral Tumours depend on this Head; to do Apoplexies, Palfies, and fuch-like: So that

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Volumes are compil'd on this one I dicant, all which are a Crambe repetita. In general, all the first and volatile Salts, all the aerimonious and bitter Plants, all the heavy mineral Preparations are here vietal; fuch are Sal. vol. oleofum, Sp. C. C. Sec. Sal. Genist. Juniper, &c. Rad. Raphan. rustican Gentian &c. Athiops mineral Chalybeates in Filings or Infusion, Antim. Diaphoretic, &c. Sem. Sinap. &c. But as it depends on a State of Blood producing it, and in this Sense is a compound Indiagnt: (for the Fluids don't offend in Viscidity only, but the Solids become also too narrow for 'em); if then it depends, as Buglivi observes, on an exalted State of Humours, where the Fibres are therefore obstructed, because wrinkled by the excessive Heat: we are accordingly oblig'd to act with a complex Intention, to open, yet cool; which in themselves are a feeming Contradiction, yet eafily reconciled to daily Experience. In this Cafe tis observable, that Snaw-Waters that are Chalyheate; cool; and yet deobstruct gently in Palfies from Bilious Colicks; and I have in this Case seen promising Effects from Vitriolune Martis, Sal. Prunell. and Decoctions of Santalum. In external Cases, Repellents, Discutients, Emollients; and Suppuratives are the Complement of Applications; but where the Impaction is strong, we proceed to Sinapisms, Bliffers, Causticks, Apertion, and Section; particularly where the Obliru-Stion is total; for that none of the Juices can recirculate, as is the Cafe of Gangrenes. Should I annex all the Cautions hereboto belonging it would swell this Book into more Pages than I have Leifure to write wand it toult be confider'd that this is defign deonly as a Sketch of a larger Track bene on The Stone of the feveral Parts of four Body is an Effect that deferves as ferious Difouffion cohow they petrify we need only qualit the feveral petrifiring Wasers rand confiden That is observable in them.

them. I remember about 19 Years ago to have met with one of this kind in Northumberland on the South-fide of the River Albe, over-against a Place call'd Hawkwell near Alnewick; where, from the South, there runs a Rivulet into the River , itis towards the East-fide of this Brook, about One hondred Yards or Itwo, and upwards, on the Bankfide; there I remark'd the Fountain perfectly clear and fweet, and, in running down, it leaves jelly'd Icicles, and all the little Plants in its Way are crufted over with Stone: If the Particles of Stone in this Water were not very minute, they would subside and be visible; but being, as I may fay, in folutis principiis, they cohere in their Course into a Substance, which, when the Humidity is perfectly exhal'd, is Stone: Upon Coction of two Quarts. there were not above a Grain or two of a white Sand at the Bottom. Tis doubtlefs thus in humane Bodies that Stones cohere; and as the Heat in Bodies helps to exhale, and the Remora's to Motion make them approach, they fooner harden, and turn to Stone, I can say little farther to the Preservative's, than that Bitters, and fuch Medicines as will hinder Congelation, may probably concur to make this Lapidifick Matter pass off in soluris Principies! Tis faid, tho' doubted, that the Indians never heard of fuch a Disease, and that this is owing to their drinking of Thea; but I believe I may add, if we credit the Relation I that there may be some doubt that our Waters boil'd even for Thea-Drinkers are not quite so clear of stony Particles as theirs may be; but all this being Conjecture, I leave it. Whenever the Stone has no Passage for its Expulsion, nothing can follow but inevitable Death: But in fuch Places where we can reach it, a double Indication arises, the one is Gubbing the Passages. and the other is Giving a Shock so she containing Parts. But the first belonging to another Head. I shall

I shall not anticipate my Observations, only here shall remark that Emeticks, Catharticks, and Diureticks, Sneezing, Riding, Jumping, and such-like, are mbat expel it from the Kidneys; from the Bladder, Diureticks or Lithotomy; from the Stomach, Emeticks, Catharticks, and Acid Lithontripticks; and in short, Expellents in all Senses. I cannot pass by one Observation of an ingenious Physician, whose Practice my Father had for some Years the constant Insight of; who told me that the Doctors Preservative against the Stone, was, common Salt

at Breakfaft; which Helmont also praises.

Many and difmal are the Effects of Worms; fo that Pechlin, p. 160. fays, Nullum tam peregrinum ese Symptoma, tamque Daijuwianov, quod Vermes excitare non possint; the Cure of which, Morellus tells us, is thus perform'd, Quacunque Qualitate vel manifestà, ut Acrimonia, Amaritudine, Salsedine, vel Aciditate, quos Sapores Lumbrici fastidiunt; vel occultà, potiuntur, are such as kill them: Hence Juice of Lemons, Sp. Sulphur, Salt, Sem. Santonic. Æthiops miner. Corallin. Ens Veneris, &c. are to be given in what Forms best please the Patient, after which expel them with proper Medicines. It would be proper under this Paragraph to mention the peculiar Remedies, but that the Brevity of thefe Hints will not allow of it: For other Live Animals, fuch as Leeches any where, they are best kill'd by Salt-water; For the Ton and Dracunculi, they are not the Produce of our Clime, nor can I tay to instance faither of them. In the standard of the

Bodies placed within us, or on the Surface of us: And altho' I shall speak against Indications taken from Procaturatick Causes; yet, I must here add, that I shall then only speak of the external Procaturatick, which is not permanent, and not of the internal. I am sensible that Poisons have a complex Indication;

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yet, I believe it will be pardonable to omit that Nicety, and fpeak of 'em all under one Head. and not separately, as I design'd to have done. It is remark'd in general, That they are carried off by that Port they entred at: After which you are to specificate the Antidotes; so that Antimonials, after sufficient washing of the Stomach, are to be precipitated by a little Salt, which effectually curbs any farther Effects from them: Arfenick requires Sal. Tartar. Mercury Sublimate, Alcalines, but more especially warm Water, being soluble in it. A good Quantity of that given, washes it off, and takes off all Effects from it. I must add, that great Haste must be made in such Cases; so that Argenick, after 3 or 4 Hours, is irremediable, as I had the Experience of, in a poor Miscreant, who believing the World was weary of him, took a Dose of this Poison at Nine in the Morning; the Apothecary, who fold him it, being call'd, defired I would favour him with my Affistance, at One: We gave him Diluents, Oils, and whatever we had near to us, to make him vomit plentifully; which he did; and having view'd narrowly what he threw off, and having not been able to observe any Particles subside; we then gave him Sal. Tartar. in Water, and made him drink of it in a plentiful Manner, but in vain; for he began to have violent Tremors upon him, and dy'd convulfive at Nine the next Morning. Upon Opening him, 'twas observable that the Stomach and Intestines were so tender, that they would hardly bear the Touch without tearing; and the Vomiting and Washing made it plain to us, why there was not the Quantity of a Grain of the Arsenick on the Stomach and Intestines; but they were gangren'd in many Places to the Breadth of a Shilling, which appear'd the plainlier, because all the Mucus was thrown off. There is one Quare to be propos'd; I remember that

that Konig. in his Regn. Mineral. fays of Arlenick. that 'tis foluble in Water; if fo, 'tis much this Fellow should not have been cur'd, who immediately upon taking the Poison, laid himself flat upon his Belly, and drank what he could bear from the River it felf. As to the Bites of Poisonous Animals, you are obliged to scarify, burn, and do whatever will call out the Poison, fix'd then only on the Surface, and to give all the proper Altera-

tives internally.

Whoever have the Misfortune to have only Share of the Poison evacuated, often suffer for it all their Lives afterwards; an Example of which I remember to have feen in an Italian Soldier at a French University, who had been bit by a Tarantula; every Summer he was feiz'd with a Return of the fame Symptoms, as if he had been newly bit; fo that in the Year 1693, he funk down as dead, whenever the Guitarr was not play'd on; and at the Beginning of the Tune again, he stretch'd himself, and gradually arose, and frisk'd and danc'd after an odd and awkward manner; which, I do affure you, little pleas'd me; and thus he continued for Seven or Eight Days, till a Jaundice appear'd, and cleared him of his Malady for that Year. As to other extraneous Bodies in the Eyes, Ears, Nofe, Vagina, and other Parts, I hope the intended Brevity of this Book will plead me an Exemption from farther Trouble on these Particulars: Only I shall note, that the Effects of venemous Fumes are here also to be amended; so that we may correct Mercursal ones, by fixt and volatile Salts; those from Lead by a Tintture of Hadera terrestris, says Mr. Boyle; those from Coal-Mines are prevented by a plentiful Affusion of Water, but internally by Vinegar and Caftor, fays Exmuller, and fo of the reft.

As for the Want of any Member, there is no Remedy, fave fome mechanical Inventions for fome few Cases, such as Glass-Eyes, Spring-Arms and Lags, unless some Talicotius will plead for farther; but where any internal Part is cut, such as a Nerve,

there is no Remedy.

Where-ever the Parts are larger than naturally they should be, where I would be understood to take the word Large to denote any Increase of Dimension; in such a Case Stypticks, Ligatures, and such things are made use of: So in a Mydriasis, Forestus advises Roses, Mint, Spikenard, &c. Pomphylix, Acacia, &c. for Troches; so in the Phylia an Injection of Stypticks in advis'd; in internal Aneurisms, whether of the Lungs, Neck, Testes, or essentially ori, Hildanus commends an Invention which you may see C. 6. Obs. 61. So in Vagina largiori, Insessus of Stypticks are of Use to hide a Crime, or add a necessary Condition for Propagation.

The Teeth are filed if too long; and Faults of the Eyes fall under the confideration of Speciacle-Makers; and Dr. Musgrave well observes, that Apoplexies, arising from the Vessels of the Head larger than by Nature they should, are help'd by

Stypticks.

But where the Parts are less, shorter, tenser, harder, or thicker than they should be by Nature; soft, oily, and emollient Medicines are here requisite; so that the Density of the Membranes of Infants is to be aided by giving internally oily Medicines, (nay, sometimes by the Nails and the Knife.) The Hardness of the Skin often hinders the full Eruption of the Small-Pox; in which Case, whoever will give himself the Trouble to turn over the Antients, will find 'em advising softning Internals and Topics.

The Hardness of the Veretrum (Cornû instar) is cur'd by Emollients and gentle Discurients, in Lustium L. 2. Obs. 106. The Crispature of the Lungsin Hereditary

Hereditary Consumptions is best provided for by oily and smooth Medicines. The Hardness of the Os Uteri internum is amended by greafie weents and emollient Fomentations. The Construction of the Glottis is help'd by an Application of Milk, Yolks of Eggs, and Sugar, according to Barbette, Anatom. Practic. c. 4. The Inflexibility of the Os Coccygis in Old Women, which much impedes an eafie Labour, is, according to Sylvius, p. 552. amended by a Suffitus of Roots of Althea and its Leaves, Mallow-Leaves. Tops of Melilot, Fenugreek, and Line-feed in Water. The Smallness of the Ureters is affisted, as I have often experienc'd, with emollient Baths, Glyflers, Lindus's, and external Undions; and if the urinary Passage, or the Orifice at the Sphinter be less than usual, if these Medicines have not their Estect then Recourse may be had to Mayern's, or the Reyptian Method. If the Parts be so Tense that they are us'd to crack, as it often happens in fiffur'd Breafts, or in Women when with Child, then oily Medicines are to be given, by the Advice of Bonetus and Etmuller. Thus I have given a Sketch of this Head.

When the Site or Connexion of the Parts are chang'd. Reduction is to be attempted by feveral Methods; thus in the Iliac Passion the Complication is unty'd by Mercury in Substance, the Bellows, or the Operation; so the Lordosis and Cuphofis are cur'd, if fresh, by Extension, and as in ordinary Luxations: This being mostly the Province of Surgeons, I shall only add some few, but useful Remarks on the Varieties of Births. 1. In all Postures from the Vertex to the Acromium, you are to deliver the Woman by the Head. 2. In all Postures from the Acromium to the Feet, by the Feet. 3. Whatever the Posture be, if the Funiculus or Placenta hangs out of the Vagina, you must deliver by the Feet, unless the Child is fix'd. 4. The Noje of the Child must look Hereditary

look towards the Back of the Laborant. 5. Whereever the Fætus is to be thrust back into the Uterus, whatever the Posture be, or whatever Part presents, the Nates are to be plac'd above the Head and Brest.

Irritation is what gives the Physician double the Credit to what any other Indicant does; for under this Head fall Vomitings, Coughs, Diarrhaa's, Pains, and many more troublesome Disorders, which are not suppos'd or dreamt of, by the ordinary Herd of the Faculty, to retain to it. Thus we fee that excessive Hunger is allay'd by Opiates; Salacity is an Irritation, which is most effectually allay'd by Smooths, and at last by Opiates. I shall in another Place recount the Reason why the Turks, at the Battle of Levenz, dy'd Hastis erectis. Convulsions are not allay'd without Opiates, but they being compounded of many Causes, I may have an Opportunity, in the Close of this Discourse, to mention more of them. Thus mostly, in this Case, Opiates are requir'd; which have different Names given 'em, as the Species of Irritation, they are to allay, will allow of: Hence they are called Anodynes, when Pains are to be allay'd; Narcoticks, when some Part is to be benumb'd; Paregoricks, (ab dyogiw, concionari & consolor, in a Metaphorical Sense;) when the Part affected is to be Asswaged and Comforted; Hypnoticks, when Sleep is to be their Effects. To expatiate on this Indicant would be too tedious for my present Aim; and therefore I shall only remark, that some Irritations being critical, cannot be supposed to belong to this Paragraph, unless they be unbearable; such are the Pains of Labour, the Pains of the Gout, &c. which require fuch Things as will promote, instead of allaying them. As to many other Indications arising in the Cure of Irritations, they, belonging to other Heads, are not the Confideration of this Re-

Ulcers are what require in general four Indications: Evacuation Mundification, Exiccation and Gicarrization: besides internal Corrigents of the peculiar Acrimony reigning in the Juices: (The First, for evacuating the Quantity of Humours in the Body; the Second and Third, in order to carry off the Humours nelling in the Part affected; the Fourth in order to purfe up the Breach and close it and the Last. For Cutting of the Supplies of acrimonious Particles, which keep Ulcers on Foot; for 'tisa constant Observation that Cacochymical Persons. whose Blood is too Corrosive, never are cur'd, till their Blood is render'd Smoother and more Balfamick) All which, we fee, are a Complex of Caufes, and ought to be referr'd to other Heads; but my Leifure not allowing me to be so nice at present. I believe it sufficient here, to mention some few Examples, to illustrate what I have advance, and fo to take leave of this Compound Indicant. In a Gonorrhea virulenta, we give Purgatives of Caffia, Rheubarb, Gream of Tartar, Mercurius dulcis, and fuch-like, for three or four times; after which, we use, for a Month of fix Weeks, or longer, if occasion requires, Balfamicks of Turpentine, G. Guajac. Ball: Copaiba. Rheubarb, and fuotilike: the first deterge and cleanfe the Part, whilft the latter dry the Ulcer: For the latter Intention, we often use also Injections of Mercurius dulcis, Lime worter and Honey of Roses, or the Decostions of Roses, Sac. Saturn, and Mel Rofar. In Ulcers of the Kednies. after due Evacuations. I have found Sydenham's Pills of Flor Unguentor, along with it or iii. Grains of Mercurius dulcis, every Day, in Rose-water, effectual. In Ulcers of the Bladder, Groenvelt's Method, with Cantharides deterges; after which, Terebinthinates, and gentle Medicines of Coral, Amber, and fuch Exic-

Exicoants, are advisable. In Venereal Ulcers of the Mouth (where the Palate is not Carious) after proper Purgatives, either the touching 'em with Mercurial Water, or a Sufficus of Cinnabar, to dry them, are useful. I have known a Salivation, rais'd by a Suffitus with Cinnabar, cure an Ulcer of the Urerus. In Fissures of the Breasts, Minium and Nur-Oil was made a Secret of, by a Midwife I communicated it to. In an Ulcer of the Intestines. Terrebinthinates are of use. As for Abscelles, after they are open'd, you treat 'em like common Ulcers, tho' the Condition of the Parts, as to Moisture, oftentimes makes us change our Mundificants for Exiccants. All Critical Tumors are to be Imposthumated, being then fitted for the Evacuation of the Venenous Particles, and tho' they should lie too far out of our Road to have any thing apply'd to 'en. as they do in the Body of the Uterus, we however can treat 'em with a plentiful Diet; also Sternotatories conduce much to this End. Excoriations. are healed by Exiccants only; and those of the Scrotum, Forestus L. 7. Obs. 39. in Scholio, cares by Unguent. de Cerusti and Lithargyr. External Ulcers are treated in the fame manner.

Wounds admit of a double Indication; for either they may immediately be united by the Suture, or the dry Stitch, and a Plaister notch'd for that End; or by Detersives, Mundificants, Sarcoticks, and Epuloticks: Discreet Surgeons chuse the latter Method, not because it's safer only, but for other Reafons best known to the Operators. The Medicines made Use of for these Ends, being repeated in every Author ad Nauseam, I shall only hint at a Wound of a Lymphatick, which ordinarily turns Sinuous, as was evident to me in a Patient I was call'd to; every Dressing, the Surgeon took out a Spoonful or two of Felly; but at last, with great Care and many Operations, it was heal'd in a quar-

nother

Lastly, it happens that there is often a Scurffiness and Roughness of the Parts, which, after due Evacuations (which are to be proportioned according to the Degree of Obstinacy) and the Application of some gentle Stypticks, as Vitriol, Allom, Juice of Limons, Litharge, Vinegar, Lapathum acutum, and Mercurials, &c. externally, are successive.

fully carry'd off.

Having run through all the Vitia of the Fluids. Solids, and Superflua, I can't in Justice omit one Thing. which yet I believe very rare, and that is Fascination; 'tis, according to Zacutus Lusitanus, L.3. Obs. 134. call'd Morbus trans Naturam: Whatever my Opinion is on this Affair, I can only add two Things, and that is, should I ever find any one performing Actions beyond the usual Limits of Nature, either as to the Affections of the Body or Soul, I must conclude 'em under the Power of somewhat above the Reach of this Nature: So that when the agoλοσοφοί, or the ἄμεσοι, talk Wifely, and discourse Nervously, or when the animaled frisk and move themselves beyond the ordinary Actions of Mankind, we may conclude 'em (and then only) under 2 Fascination; but what Medicines have to do in this Affair, I frankly confess, I have never learn'd: If indeed the Effects produc'd by fuch a Case, are the Alteration of the Juices, I believe Drugs may then produce great and good Events; but when the Fancy is Obsess'd, 'tis Folly to stretch the Medical Art beyond its Limits; and therefore Natural Religion obliging us to acknowledge a Supreme Being, we must necessarily submit to own that the Permissions of That Being give Rife to furprizing Phanomena, which fall not under the Consideration of Art, and therefore this is necessarily the Province of another

nother, and very different Species of Furisdiction, and (to be fincere) it must be under the Direction of the Divine Ministry; where the Hand of Man is shortned, and the Glory of the Highest is exalted: In this we do but follow the Steps made in Scripture, where the Daipovianos was not Cur'd. but by the Hand of our Blessed Saviour. I am not ignorant that the Divines fay it was an Epileptick Person; yet we must believe the Expression, and Justice can be done, by believing it rais'd by a

Permissive Power granted to the Devil.

Thus have I, in a short Sketch, given you an imperfect Table of Indicants; to which, if I should add the Euodia Medicorum, I shall have given sufficient Proofs of the Usefulness of this Method, beyond all the imaginary and fancy'd ones of those Students of Phylick who place their whole Confidence in Mathematical Demonstrations alone: But as my Defign is no other than to whet the Reader to a further Enquiry, it must only be expected that I shou'd just hint at the Particulars, I reserve for a fitter Season; where what I have advanc'd, shall be made evident to Demonstration, through the whole Body of Practice.

All Cures, fays Hippocrates, are made by Addition and Substraction; and he adds, Contrariety is the general Basis of the Art of Physick; and this the same Divine Coan terms Evanliwais which he understands to be as well in Diet as Drugs, Aphor. 22. Sedt. 2. and L. Epid. 6. Sedt. 8. S. 46. This Addition of something wanting, and Substraction of what is too abundant, is an Argument that the Causes are to be taken away in the Cure of Diseafes. Let us take a short View then of the Causes that are to direct us in our Course; and how they are to be marshall'd when they are join'd in any

Dileafe.

There are Three Causes; First, The External Evident, or Procataratick, (call'd also the wegnstausun); which having left nothing fix'd upon us, only requires avoiding of em; so in a Disposition to a Furor uterinus, we must take care that the Fire be not sed by the Presence of what is the Subject of the Appetite; for in the segue vivilar to segue. So in Pestilential Cases, we must avoid the Occasions; cito, diù, tardè, eundo, morando, redeundo. Having shew'd above, but more at large in the Euodia, how little this Cause is to be regarded in guiding us how to Cure, I shall proceed to the rest.

The next Causes are the Antecedent, by which I mean the depray'd Humours in the Body, endow'd with a Power, upon any occasion given, to produce very dangerous Symptoms; and such is the Viscid in the Pleurisy; such are Bilious Humors in a Colick; such are Salt Humors in a Consump-

tion.

The Continent, is the Antecedent asting; so the Salt Humours fix'd in the Lungs, are this Cause; as also Pus in an Abscess; Water in the Cavities, in Dropsies; Venenum lodging in the Stomach; and Urine in the Bladder in a true and genuine Ischury; all these, I say, are Continent Causes, or in other Terms,

the Immediate Cause.

In general then, Diseases must be cur'd by remedying their Causes in such order as they began, unless some great Reason obliges us to alter this Method: The internal fix'd Causes are remedy'd by Evacuation, (under which Head I reckon also Translation and Extirpation) and Alteration: Evacuations are Emeticks. Catharticks, Diaphoreticks, Diaphoreticks, &c. Translations are all the Revulsions we make use of. Alteratives are of two Sorts; and both being contrary to the reigning Cause, I need not now mention their Disterence: But it sometimes happens that Diseases are irremediable; and

and yet we are, for the comfort of the Sick, oblig'd to Patch for a while, by remedying such Symptoms as would destroy the Patient of themselves: Thus, in an incurable Suppression of the Menses from a Tumor, we are, according to Sennertus, L. 3. C. 3. oblig'd frequently to Bleed, to prevent the real or metaphorical Plenitude in the Blood, from whence many dreadful Symptoms arise. When I speak of Alteratives, I would not be understood to confine myself to the Internal ones only, but wou'd have

my Views extended to Topicks also.

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This general Order holds good where the Symptoms supervening are gentle and slight, for then the taking away the Antecedent Cause, relieves, nay, cures; but when the Symptoms proceeding from the immediate Cause, are Violent, then are we oblig'd to have Regard to these Symptoms by remedying their Causes; thus Agonistical Crises are not to be suppress'd, tho' not promoted, for that they often work a Cure, or pave the Way for it; but we are frequently oblig'd to have Regard to the Symptoms when Violent, even before we can remedy the precedent Causes. So that in an Iliac Passion, before the Obstruction of the Intestinal Faces can be remov'd, we are often oblig'd to amend the Vomiting, by allaying its immediate Cause, (viz. the britation.) What I here say of one immediate Cause, I would be alike understood, if there be more; as in an Hamoptoe from acrimonious Humours; the Acrimony and the Meatus apertus, are two immediate Causes or Effects, (for I have hinted at my Reasons for this above); the first of which requires smooth and obtunding Medicines; and the latter, Stypticks and Agglutinants. And as an immediate Cause requires our Care sometimes even to the neglecting its Original; so one immediate Cause sometimes over-ballances another in F 2 like

like manner: From the imminent Danger of which,

we are to fteer our Courfe.

I should, to the general Method, have added the Measures us'd in Crises, for that they appertain to Evacuation or Translation: They are to be promoted fo long as they are Critical only (then Liberali ac Libera Expurgatione autopatos quiescunt); for when they cease to be so, they deservedly lose that Denomination, and are then Symptomatical and remediable by proper Methods nam'd above: But as to the particular Rules they are to be manag'd by, also as for mix'd ones, and as to the several Metastases, whether Salutary or not, it cannot here be expected I should enter into a Detail of 'em.

Hitherto have I hinted at the Evolence I I have only one word or two to add about the Suver-Jenverguera, and the 'Arlevelenverguera, and I shall

close my Discourse.

· Causes, we see (for I mention nothing of Difeases, or the Reasons of those Causes) sometimes Concomitate and Co-indicate; fo that I have feen in the Right Honourable the Lord W—n, a Tertian Colick from a Suppression of the Gout: The Causes I look'd upon to stand thus; by an Application of cold Water to the pained Part the Humours were repell'd and retain'd in the Blood, Part of which, ranging there, produc'd this Ague; and another parcel of them hx'd on the Intestines, produc'd the Pain: This I take to be the "Or! of the Malady; as for the Διότι, I leave it to Enquirers more at Leifure. Let me now proceed according to the the Methods I come from mentioning: The Stuffing of the Blood with an impure and bilious Plethora, requir'd Evacuations: The Infarctus of the Intestines with Bile, also co-indicated Evacuation: The Shifting and Period, requir'd the Bark; the Pain, Opiates: And Lastly. The Gout's lurking in the Eody, all the convenient Stimulants to invite It

### The INTRODUCTION. 69

to its proper Station. I look'd upon these Heads to direct me in my Courfe I was to take, and having follow'd 'em, I accordingly fucceeded: Upon confulting the Experienc'd Dr. Radcliffe on the Case, tho' I recited him every Particular, yet his Answer was, that we should forbear Evacuations; but I should have endanger'd my Patient by such a Neglect: However, Quandoque bonus dormitat Homerus, and his Civil Treatment of me, whilst alive, will oblige me to believe, that 'tis as hard, even for the most Sagacious, to take a Case as a Face, at a Distance.

When Causes clash with each other, and there is a Contrariety in 'em; I shall only mention, 1st. That they are sometimes so far on a Level, as that you must take 'em both off equally: So in a Palsy, and the immoderate Flux of the Menses: If your Intention is to Cure the Palfy, you increase the Flux; if, on the other hand, you Cure the Menses, you render the Palfy irremediable; in fuch a Case you must blend your Medicines according to the most Exigence. I remember Schmidius mentions that the Bark of Seville Oranges unripe, boil'd in Water, curbs the Menses; (in which Dr. Hamilton follows him and Etmuller); but this Fruit being also aromatick, is an Aperient, and did sometimes alone answer the End in this Case mention'd: So careful has the Divine Providence been over us, as to blend contrary Qualities in one Plant, to contrast with such contrary Effects in our Bodies.

adly. Whenever they are contrary, and there is any Excess on either side; if this Excess be small, we must have Regard to the most urgent, and to that which Cures the most urgent, tho' they Suffer a little by it; however, having some Eye to the contrary Cause. So I remember to have been call'd to a Lady who had a Dropfy in the Abdomen, which was of Sixteen Years standing, or more; she was on a sudden

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den feiz'd with a violent Fit of the Stone; having pass'd a large one, and suffering more fince the Delivery of it than before, with Syncope's and cold Sweats, the had reason to believe another was also paffing. I had not much to fay to that Head; but argu'd that she was yet more dangerously held than she imagin'd, and that another Species of Disease had seiz'd the Part, which was a beginning Inflammation of that Kidney, and that without Bleeding, it was impossible to relieve her; which she yielded not to, for the space of an Hour; upon this Head, that she had a Dropsy upon her: But having perswaded her of the immediate Hazard she was under from the Inflammation, and the little Damage I should do her by so small a Quantity of Blood drawn off, the confented; and the Apothecary had not taken away two Ounces 'till she cry'd aloud the was eafy; but four Ounces being tapp'd off, by keeping her from heating Diet and Cordials, the recover'd perfectly.

adly. But where the Excess on one Side is so apparent, that we must, by indulging 'em in it, destroy 'em, 'tis reasonable to give Eye to the most urgent only, and to That which acts as a Cause, and totally to neglest the other. So in a Lues Venerea join'd to a Hellick (and even also a Consumptive Cough, where there is no Ulcer) the curing the Hellick avails nothing to the Cure of the Lues, which yet ranges and re-produces the same dire Effects; all which I have taken off by a gentle Salivation, without any Regard had to the Hellick. So in an Hamoptoe, where there is Danger of Suffocation; in this Case alone it is lawful to cause an Expedioration of the Blood; for the Suffocation be devrigus agens, yet it is the most urgent; and in this we follow Galen's Law, ut Pracedat Sanatio ejus quod Caufa eft, vel magis urget, vel sine quo alterum tolli nequit.

Thus have I, in as short a Manner as I could. made it plain, that the Heads, I mention, are the only Bases to proceed on; and that whoever will range beyond these Bounds, is bewilder'd and plung'd in all the Difficulties that can befall a missed Traveller: Whoever has the Fortune to know what Cause does affect us, many of which are evident to Sense, is the likeliest Person to serve the Republick in his Way; but I shall conclude, that Prudence must be the Portion to distinguish the Phyfician from the Empirick, fince La vera Regola, è Saper rompere le Regole à Tempo & Luogo.

Thus then, have I, with some Unwillingness, trod a Path for the Good of Mankind, which puzzles the Heads of the Thinking World, and yet is in itself Easy and Conceivable to the meanest Capacities. Why is it that the most Learned are not always the best and most Successful Physicians, but because they busy themselves in many Parts of Literature little, if at all, to their Purpose? Whose good Parts, if employ'd in the Advancement of their own Arts, would be sufficient even to build a Profession, much more to give Additions to one long fince begun. But having fufficiently tir'd my felf, I am afraid I shall give my Reader a Distaste, if I should add to what I have already advanc'd, especially fince I resolve, some time or other, to Publish the Practical Observations at Large, of which these are only an Abridgment.

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Criticon

Thus have I is as from a Manual as I could, lada of a morniora I sabtat asia mini minig in object only Ester on proceed one and that whoseer will carree new and the Bounds is a wilder dains planned d and the Different of the land to the first of the in willer, W. news that the Toronte to them will be an Justices was a little to know you falls once and Source is the sitelieft Person to Laverille House, and read adminion high I had a well to a rish The state of the second of the A property of the soul character and more necessity John Market and Market Langue D. Langue.

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## Criticon Febrium:

OR, A

# Critical ESSAY

ON

# FEVERS.

CHAP. I.
Of FEVERS in general.



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HE design'd Brevity of this Tract cannot be supposed to allow me to expatiate upon the usual Divisions of Fevers: In which, I fear, much Time has often been spent to little Purpose; since it will ap-

pear that these Names brought no new Methods of Cure along with them, but lest many Doubts upon the Practitioners; and those, when they come to be seriously weighed, very trisling, and such as prove an Amusement to the Tyro's, but are nauseous to the Grave and Thinking Part of the

Profession. Tis an Undertaking which has employed the best Heads of all Ages: And I hope the Reader will do me the Favour to excuse the Attempt by so barren a Capacity as mine is, for the sake of having wished well. I am not for coining fine-fram'd Hypotheses, nor for advancing any thing which I dare not rely on as Fact, and Such as has been the Result of a patient Series of Observation for many Years; and, if I should have added, of a successful Practice, I believe I should not want the Suffrages of such as I have had the Honour to serve.

An Unufual or Preternatural Heat along with a Frequency and Quickness of Pulse, detect a Fever; though as to the immediate Causes of one, all are not agreed, as will appear anon, each liking to prate in a Targon of his own, A To Octov was the Language of Hippocrates; and 'twas a Frankness our later Hypothetical Gentlemen have not fufficiently acquiesc'd in; where, however, the Reasons given in, have little more in them, than also calling it a Divine Cause. This frank Manner would have faved the Practitioner much useless Enquiry after the Διότι of Fevers; and yet he would have been far from being left to Chance to have founded his Indications on; fince in the Discovery of the Erring Motions of the Fluids he has his Senses to rely on. to descry such Symptoms as give Rise to the different Proceedures, which is the "Or we look for.

The first Criterion then by which we discover any Feverish Disposition, is a Frequency of the Pulse; and therefore the Motion of the Blood is supposed to be accelerated in Proportion to the Frequency of the Pulsation. However, the Frequency of the Pulse alone does not constitute a Fever, till it degenerates also into a Celerity, which naturally happens when the Pulse rises to high Numbers. To ascertain the Nature of a Frequency and

Quickness, and their Difference, the Space, the Idus, and the Interval of the Pulse are to be well remark'd. By the Space, we judge of the Strengths of our Laborant: By the litus, we pass a Judgment on the Modality of the Stroak or Pulsation; but in our present Case, whether it makes any Demurt on the Finger, which denominates it a flow Pulse, or whether, on the contrary, it immediately recedes in a Systole, which gives it the Appellation of a quick Pulse: And lattly, by the Interval, we measure the musical Time of its Return, which if small, its a frequent Pulse. Hence Frequency and Celerity are easily distinguish'd in Notion, but not often too well in Practice.

We may, for Curiofity's fake, fee below, whether some extraneous and irritating Principles in the Blood don't give Rise to this Frequency and Celerity, as also the unusual Heat; and how well-grounded it may be to conclude from hence, that the Circulation is hasten'd in Proportion to the Number of Impulses, as is a common Observation among such as have considered the Laws of Hydroslaticks, abstracting from Resistances, which are not

the Business of this Head.

DAY.

#### CHAP. II.

The various Sentiments about the immediate Causes of the Heat, and the Frequency and Celerity of the Pulse in Fevers.

THE Ancients suppose a Putrefaction of some Parts of the Mass; and that these appear in the Urine of Persons in a Criss, and pass off by the Bladder and the Pores of the Skin in critical Sweats. Sweats, and so determine the Struggle between Nature and the Disease, by the Load extirpated.

Others believe it confifts in a preternatural Fermentation; and that an 'Aprile's of its Principles occasions it; and that the Effects of this Fermenta-

tion are either Diffolution or Coagulation.

Some place the Cause in a Turbata Sanguinis Mistura; for they find that the Urine generally is muddy before Concoction. And when it begins to drop a Sediment, there is Hopes of a Recovery; this being a Sign that Concoction is begun, and that, if we can manage well, Affairs may succeed.

Many believe an Acrimony of the Juices to give

Rife to a Fever.

Bernoülli has advanc'd, That the Breach of the Globules occasions the Spilling of a venenous Air

into the Mass, and so disturbs its Order.

Many more are the Opinions of Authors, which the Reader, if he delights in such Disputes, may take the Trouble to consult at his Leisure. But none have been so lucky as the Learned Bellini, whose Sentiments are confirmed by Practice: For the Pulse is not vitiated but from the Vitiation of the Blood; and the Blood offends only in its Quantity, its Motion, or its Quality, in some or all of these.

The severest Mathematician never will nor can deny, that there are some peculiar Assections of Matter in the Mass of Blood, which irritate more or less, and create or resist Cohesion. The various Qualities the Secretions are stock'd with, are but the Consequence of a material Pre-existence of them in the Mass. What are the odd Phanomena upon Mixtures, and their Esses, but the Result of these Qualities? How otherwise happens it, that we have known the Urine of a convulsive Person, burn the Shirt almost as readily as an acid Spirit? Many Instances are needless upon so evident a Case;

nay, I shall add that these very Qualities are the constituent Principles of Frequency in the Pulse; and that their Valores encrease or decrease, as they

are more or less active.

Among one of the most noted Qualities in the Blood, is its Rarefactive Power: For as all Fluids are more or less porous, and consequently contain more or less Matter in their Bulks; so may they be rarefied in a Ratio to their Densities. But the Blood being compounded of Globules including an Aërial Substance, must in the first Place, only touch in twelve Points, and consequently have great Vacancies interspers'd. Now if the Air be rarefied by Heat, or some other Accident; the Air without these Globules, and that which they contain, must expand reciprocally to the Rarefaction of this External Air, until they arrive at an Aquilibrium, which often happens in our Blood. even to a Rupture of the Vessels: But also in the Blood there are certain Principles of Heat discoverable; for by the Torture of the Fire we find a large Quantity of an Igneous Substance, which our Chymists are pleased to term Phosphorus: And fince nothing is required to be mingled with it that may afford this Matter, therefore this Inflammable and Burning Phosphorus is materially pre-existent in the Mass. And hence in Fevers we become hotter, because there may be a larger Quantity of this Matter in the Blood. For thus we only follow the Eootsteps of the most Ingenious and Learned Sir Isaac Newton, who, accounting for the Effeds produc'd by the Sun, supposes it a great Body of Earth heated to a certain Period, and that all these Effects of Heat depend on its Fire. I cannot, by a Parity of Reason, see a readier Way to explain Heat in our Blood, than to suppose (what is but Truth) that it contains Fire in it: What other is it than this Fire that causes the Thermometer to rise to the same Height. Height, when applied to the Blood or Hand, as if it were Boiling Water? And if the Authority of the Hebrews or Hippocrates will add any Force to the Argument, the first call it The Fig. 777 all which we see fignify somewhat belonging to Heat and Fire, and Hippocrates calls in Morb. Epidemic. Febris vehementissima, Two, or Fire (in agroto secundo, nomine Sileno.)

It may be objected, that the Serous Parts in the Blood would quite extinguish this Phosphorus, and consequently our Heat. If it be scanty, it does in effect often do so. Again, if we supply the Decumberts unwarily in Fevers with too abundant a Quantity of Watry Liquors, we find that, in Ef-

feet, it often does fo.

But I fee no Contradiction, to suppose that it may live in a humid, as well as the frigorifick Mixtures can even freeze Liquors into Ice upon the very Fire; or as well as Camphire flame under Water; as does Gun-powder blended with Charcoal, Sulphur, and Salt-petre. What Wonder then, that the Blood being a Fluid, being capable of Rarefaction, and having an innate Principle of Heat in it, so various and stupendous Effects should be produced by it? What Wonder if the Moments should encrease or diminish in Proportion to the Degrees of this Heat and Rarefaction?

Having said enough to convince us that the Mass of Blood is stock'd with Qualities of very various Natures, the Thread of my Discourse leads me to affert, with the aforesaid Ingenious and Learned Bellini, that there is nothing farther contained in the Blood, save its different Quantities of Matter, by which it fills the Vessels to a certain Pitch, along with its Degrees of Velocity, which are but the Result of the more or less active Qualities contained in the Blood: And hence has the admirable Newton coin'd standing Laws whereby to measure the

the Moments or Aggregate of Motion in moving Bodies: From him 'tis evident that the Degree of Celerity is but a Quotient of the Moment divided by the Quantity of Blood, which all know. The Increase of the Moment will hasten the Pulsations. for if 150 tb. of Blood and Juices (which Keil Supposes to be in a Body of 200 th. Weight) be the Quantity of Matter in the Vessels, and the Degree of Celerity is equal to 2, then the Moment is 300; if only equal to 1, then 'tis only 150. Now fuppose the Moment 150 gives 70 Pulsations in one first Minute, then the Moment 300 will give 140. which is called the Coacervatus; and I have found it in Persons dying in a Fever; so that doubled Moments give doubled Pulfations. But whether 'tis possible for a Physician to discover by the Pulse alone, that the Fever proceeds from the Addition of Matter, as from Drinking, or from the vitiated Qualities, (which, as I've faid above, are what give Rife to the different Velocities) is not eafily determinable. The Learned Bellini hints, that the Magnitude of the Pulse arises from the Quantity. nay is reciprocal to it, when he tells us that Momenta Distilitionum sunt reciproce ut Resistentia à Sanguine; from whence, in this Case, it might justly be inferr'd, that Inflammatory Fevers, from catching Cold (where the Quantity is encreas'd by the Perspirabile obstructed) or those from Surfeits (where we are fure of a vast Encrease, over and above the exotic Qualities ingested) may claim the Title of strong and full Pulses, if this Gentleman makes the Advance upon Experience. I may farther add, that as the Motion of the Blood is compounded of a direct and a lateral one (as is that of all Fluids,) it may be own'd that the Velocity wou'd drive the Blood to the fame Space forward; but that the Quantity would not only drive it fo far forward, but also farther outwards, and make the

Vellels more turgid: Which seems agreeable to Borelli's 60th Proposition in his O Econom. Animal. p. 943. If these were Facts, the Discovery would be of Use to direct us in the Species of Evacuation with a feeming Dexterity: But 'tis much fafer to floop to Enquiries to affift us in judging, in which, Caution is a pardonable Fault; fince I cannot pra-Etically affire you, whether the bare Encrease of the Velocity of the Blood's Motion will rarefy its Particles, and fill each Section of the Veslels in an equal Degree, as if the Quantity had been really added.

From what is faid, this Corollary may be inferr'd, that the Mass of Blood contains some unusual mixture of extraneous Qualities and Matter, which makes its Motions irregular, and keeps it out of Order 'till it is separated from it. 'Tis this which gives Rise to all the Symptoms that, in Fevers, so grievously afflict our OEconomy. This Matter is contain'd in the Sediment, and is dissoluble in the Urine; for when 'tis newly made 'tis transparent, and after Secession may be made to reunite to it by any adventitious Heat, provided the Degree be of a certain Standard; which is a Conviction that a certain Degree of Warmth, in humane Bodies, is requifite to a Separation; of which Experience is the properest Judge, and may in part be guess'd at from ill Symptoms supervening, over and above the Fever; and this is the best Standard of the Fever's Excess of Heat or Slowness. What hence may be deduced, is, that these Contents which take what Place their relative Gravity allots them, may either be faline or sulphureous Bodies, or a Combination of both: Hence it is that Fevers, which are accompanied with a violent Heat and strong Pulse. diffolve it too much, and the rapid Motions hinder its Secession: And, on the other Hand, those with little Heat and weak Pulses argue that this Matter

Matter is too gross and viscid to pass the Emunchories, and that the Spirits are too sew for the Quantity; and thus it falls out, that neither way the

Ferment precipitates.

I shall hereafter have Leisure to shew, how Symptoms arising from the different Causes, give very different Views in the Cure, and that neither a Fever, nor its Symptoms, are to be handled by fuch illiterate Persons, who treat the Decumbents in a Road of trifling or dangerous Practice: And I hope to make it appear anon, that Symptoms are as the Fevers they proceed from; either from too violent or too weak a Motion in the Blood, forcing the morbid Particles upon a Part, or accumulating 'em on the Organs; for when they are Viscid, their Trajection must be difficult. But when I speak of too flow or too weak a Motion, I don't thereby understand that the Motion of the Blood is flower than in Health, for I have hinted above, that the flowest Circulation in a Fever, is almost and quicker than in a healthful Constitution; but 'tis meant with Respect to the Morbid Particles, which by this Motion, as failing of the just Standard, and a vigorous Propulsion, can never be excluded from the can so otherwise be demonstrably determind, alch by the Person's having often before them a Seizure

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Of the two Generical Divisions of Fevers, and the Differences of them; with some farther Proofs of their immediate Causes.

Many are the Specifick Divisions of Fevers, which I shall not stay to Dilate on now, but shall proceed to shew, that all Fevers that afflict us, are

of these two: And all the Cures of Fevers would be of no use, if we did not regard these Divisions.

If we are seiz'd with a Fever, and if our Strengths are sufficient, and the Heat be of a just Standard, the Morbid Particles will be gradually attenuated, so as to pass the proper Emunctories of Separation in a due Season, and the Fever will cease in a longer or shorter time: But if the Blood he in any extraordinary Commotion, or he less active and warm that this Standard, then we either hurn and scorch with Causi, or Ardent Fevers, or we are afflicted with Hedical ones, or such as are much below the Standard for Separation; and these Entremes are the only Occasion of all the supervening Symptoms, if we add some Qualities conjoin'd, from whence these Two Kinds have their Esse.

If the fiery and acrimonious Particles, then in the Mass, be plentiful, with Regard to the Humid ones. the Blood will be hotter, and the Ardent Kind will hence arise, but if these Particles be overstockid with Serous and Humid ones, then the Fever is of the Slow and Hellick Kind. To give a perfect Judgment, how far they deviate from the Natural Heat, can no otherwise be demonstrably determin'd, than by the Person's having often before such a Seizure try'd with a Thermometer the Standard of their Natural Warmth; but this not being as yet pra-Etis'd (which yet I look upon to be a Fault) we can only keep the Patients at fuch a Heat as that all Symptoms do abate or quite vanish; and only those of the Heat, and Celerity of the Pulle, remain.

This is the most useful Division of Fevers for Practice, and ought to be the first Question enquir'd after; since it is the most General Guide in all our Indications, and leads us to know, whether we must

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Evacuate, and in what Manner; as also what Sort of Alteratives are convenient, and what dangerous. Under each of these Species are contained the Intermittent, Remittent, and Continual; which Last is subdivided into the Malignant, Pestilential, and Pestis; or, as some please to term em, maligna, malignist, malignissma, as only differing in Degrees.

Bellini reckons, that fome viscid Particles, sticks ing in the Capillaries, produce a Fit, thus; When these Particula frigorifica fix in the Extremities of the Arteries, then arises an impediment to Motion, whence arises a Sense of Cold : But when this Obstade is shook off by the Moment of the Liquids preffing on from the Heart, Heat, and laftly, Sweats follow, which take off the Fit or Fever. But what may produce these Particule frigorifice (of viscido liquide, as he terms them) is not fo evident; however, in Atl: Philosophic. Lond. No 150. by a Mixture of Sp. Aris virid, and Sang. buman. Dr. Slare produc'd so much Cold, as caus'd the Spirit of Wine in the Thermometer to fettle, in Summer, almost to the Degree of Freezing; and this he thinks to be a pretty good Method of folving the Phanomena in the Cold Fits. and of alol on

deny any Acid in the Blood, tho' tortur'd by the severest Trials of the Fire, and consequently do grant no Effects in the Blood from them: But first, Vieussen's Experiment afforded a Dram of Acid more than the Bole cou'd have done; and every one knows, how capable an Acid Spirit is to produce stupendous Effects in the Mass. Edit. A Saline Taste is not made without a Mixture of some Earthy or Alcaline Body; and a considerable Quantity is required of this Acid, to make it taste salt; so as Spirit of Salt zi, with Sp. of Hart's-born zij, make a Muriatick Taste, according to Floyer: Also Urine, as an Acid Salt, corrects the Bitterness of

Coloquintida: And Mr. Boyle precipitated, with a Solution of the fixt Salt of Blood, in Water, a Solution of Fine Silver in Aqua Fortis; which is an Argument of its being of the Nature of Sea-Salt. Mr. Boyle owns the fame Sort of Salt in the Blood: The Bilis atra makes Syrup of Violets Red; and Rheumatick Serum of the Blood, makes the Syrup Green; therefore the Blood is flock'd with Salts of different Kinds. 2dly. Many of the fecreted Humours taste very acid, and produce all the Changes that Acids do when they are blended with fuch Things as convince us of an Acid in a Mixture. Moreover, I shall add, that altho' there are plain Tokens of an Acid in Spaw waters, where the Tin-Sture of Turnfole is turn'd Red by 'em; yet Du Clos observes, that this Acid cou'd not be obtain'd by Distillation. From these few Arguments, then, I infer, that an Acid is really in the Blood; for I hope we will not deny our Senfes, which are the only Criteria we have wherewithal to judge on Medical Affairs. Hence then, it may fafely be concluded, that Acids are materially existent in the Muss: As to our being supply'd with 'ent, we can be at no loss to know how, nor, by Consequence, how our Blood can be Coagulated by 'em, to as to canfe this Sense of Cold in Horrors. The year verb

Another Difficulty yet remains; which is, Why we should grow Cold only at such certain Internals and Distances, so regular, as if we were a Piece of Machinery? Willis looks upon a certain Quantity of the depray of Juices to be necessary to produce the Paroxysms; and this he proves from the Possibility of hastning or retarding the Fits, by Overfeeding, or Fasting. I shall not waste my Time in reckoning up the various Opinions on this Head, but shall frankly deliver my own Thoughts 2 200

Experience convinces us, that Fevers are not of equal Duration; And confequently the Matter which passes

passes off Critically in the different Individuals, cannot be capable of equal Attenuation in equal Times, fome requiring Four, others Ten, and many Twenty Days, or more, before the Matter is fully ripen'd, or the Fever comes to its Critical Period: This holds true in Continual Fevers: And fince Agues are but repeated Fevers, we may conclude the Blood's mixture so very Heterogeneous as to contain feveral Quantities of this Matter, each of which has very different degrees of Cohefion, altho' it be the same Species of Matter; one Parcel of which is already fit for Exclusion; tho' another will not 'till to Morrow at the fame time, or longer. Hence is the exactness of Turns, and the due Distance of Fits; hence also Tertians are often chang'd into Quotidians, and vice versa. Hence it is we often have feen fix or feven Fits, and no more; hence happens also its longer Duration, from a greater Quantity of these unequal Cohesions, that require exactly fo many Circulations before their Maturation; so that if we suppose a Person to be seiz'd with a Tertian, and that the Quantities of Matter are express'd by the following Letters, viz. a, b, c, d, e, f, g. let us now suppose the Particle a to begin on Monday, then the Particle g will produce a Fit on the Saturday Se'nnight after: If they are cur'd at g, then g has requir'd 15 Days Maturation, and therefore must a require the same too; hence it is that we are often disorder'd for some Days before Fevers and Agues. A 10 2 0 2 1

Having answer'd this Question, I shall proceed to shew you how Fevers differ among themselves in

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An Intermitting Freer, (whether a Quotidian, Terrian, Quartan, or any other) hegins with a Coldness seizing on the Region of the Loins, along with Harrors; the Nails grow blue, the Head aches with gravative or tensive Pains, the Pulse is sideup.

flow and oppressed, and the Urine is clear without a Sediment: In the middle of it, comes on a troublesome Peat, various and irresistible Fancies insect us, the Pulse grows quick and strong, the Urine is reddish; a Thirst and many other Symptoms arise. When the Fit declines, the Pulse becomes undose and stronger, the Urine settles, they sweat plentifully, all the Symptoms abate, and at last an Awagesia succeeds, and then too, the Appetite returns, and we are now no farther in a Fever, till the Return of the Paroxysim.

A Remitting Fever also begins with an Algor and Horror, after which they grow hot, with a quick and frequent Pulse, various Symptoms come on; at the Decline of the Fit the Symptoms abate, the Heat lessens, but never quite leaves us 'till the last Fit; the Urine settles, the Pulse grows milder, and they sweat: And thus several partial Attempts are

made, till the Grand Decline. It death to vitually

A Malignant Fever begins too with a Rigor, if of the Hedick Kind; but a Horror, if of the Ardent Sort; after which, from the Beginning of the Fever to the total Decline of it, (for I here abstract from considering it, as turning Remittent or Intermittent before it ends;) 'tis equable, and without any Paroxysms; the Urine is clear or strawy, the Tongue dry, brown, or black, with the Aphiba;

and the Spirits fail of supper a floor embredt ban

Tis then plain, that all Fevers begin first with Algors, Rigors, or Horrors; after which come on afflicting Heats along with a Train of Symptoms; and at the Decline, Sweats or some Evacuation of equal Force to them, which abate the Fever or quite take it off. The Difference then is, only that in Agues the Horror, Heat, and Sweat terminate in few Hours in a perfect Calm, till the next Returns In Remitterers the Horrors are only at the Beginning; the Heat is constant, but not well

equable; the Fits terminate in Sweats, so partial as only to abate, not extinguish the Fever 'till the next Return; and thus it continues decreasing till the Grand critical Evacuation. In the Malignant, the Algor is not very remarkable: The Heat continues equable many Days; and what Sweats supervene at first, are sometimes the Effect of the ill Regimen; but those Sweats that come upon a digested Urine, after the State, are deciding, and terminate the Fever. The Algors are Arguments, of Sick'ning Nature; the Heats and Symptomatical Sweats, of her Struggle; but the critical Sweats, of her Victory.

From what has been faid above, and from what appears, it may be concluded, that if the Quantity of Matter or its Qualities (from whence arise the different Degree's of Velocities) were always the fame, we never should be affected but with one Sort of Fever; but as they vary infinitely, so do their

Effects, and fo do Fevers.

In the Beginning then of all these Fevers, the Principles, which constitute them, feem to be as yet in the Ore; and the Blood is fo obtunded by this Mass (and the Pulse observes the Motion of the Blood) that the irritative Particles are not extricated but by reiterated Circulations; and then the Mass begins to be more open in its Texture; then the Heart begins to be vellicated, and the Pulse in Proportion grows quicker and stronger; the Skin grows hotter, (but much more fo in the ardent than in the hellick Kind; ) and at last (all at once, or by Degrees) whatever is noxious begins to be thrown off, and to be expell'd through some Emissaries, and then the Fever, of what Denomination foever, abates or ceases. The Matter and Qualities of the Blood which make an Ague, must be different from those which constitute a Remirrent Fever and both must infinitely wary thom when gives Rife to Communat ones: But as it has been proved, that Woody

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nothing but the Quantity, Motion, and Quality can give Rife to any of these; 'tis consequential that their productive Principles only differ in Degrees.

Hedical, and they into Intermittents, Remittents, and Continual; (which are either Malignant, Pestilential, or a Pestis.) There are also Subdivisions of Fevers, as Hedicks seem referrible to the Remittent Kind: And some may properly enough be term d the Neutral, for they may belong to any of the Species, and they frequently do, (such are the Measles, Small-Pox, Rash, Scarlet, &c.) for sometimes they become Epidemical and Pestilential, as they have been for these six Years; and in other Years, they are left to the Care of the Nutricula.

These Fevers are known frequently to change Hands with each other: So that what to Day is Continual, to Morrow may turn Remittent; nay, Intermittent, according to the Quantity of offending Matter, which is extruded: And, on the other hand, we frequently find that Diaries, by the wretched Milmanagement of Pretenders, are too often heightned into some of the former; which still plainly proves that all these Fevers differ only secundum

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## Of an Ephemera; its Causes and Signs.

I shall not dwell upon this Head, but shall shew you the Procatarctick Causes of them, in which

the other Fevers share in common and hand add at

Cold is the most common evident Cause of all Fevers, and the Pores being obstructed by it, the Blood-Vessels become anuch distended, by the Addition of the Perspirabile, which may occasion a larger Pulse, in Proportion to the Quantity added; for Cylinders of equal Aleitudes being to each other as their Bese, a larger Diameter argues a larger Best, and a darger Quantity; and hence may happen a larger Pulse.

Woody Places have been found to occasion Sicknesses, and particularly Fevers, from the same obstru-Elive Power: And the ingenious Dr. Woodward has in the Ad. Londin, Philof: given us a most accurate and laborious Account of the Reasons of the Unhealthfulness of Woody Places, as in America, (particularly when our Plantations first fettled.) For He having found by Experiments, that a Plant wou'd augment but as I to 46 (or 700) of Water; and that the Growth was to the Evaporation but as 1 to 46 (or 700). How Dampy then must a Place stock'd with Trees be, and how dangerous for Health? Under this Head is rang'd Moist Weather, which also lessens the Air's Weight so much that the Blood must rarefy in Proportion, as has been faid above: Hence in England are we fo Healthlefs.

The Heat of the Sun sometimes rarefies our Blood into an Ephemera; but our Northern Climes knowing few labour from this Head, 'tis enough to have hinted at it, and I shall proceed to one more, nay, most common Cause of them, I mean an Excess of Drinking; which both adds Matter enough, and Qualities sufficient to fire it into Commotions.

Most other Causes depend on some of these, and

therefore I shall proceed.

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The Signs of Ephemera's, are the numerical Symptoms which point out other Fevers; and I know no Difference, save the Duration, which I have sufficiently prov'd to depend on the greater Excess of the Quantities or Qualities: For they begin with gentle Rigors and Heat; and all the Symptoms common to other Fevers, follow; and they terminate with Sweats: Sometimes they last only one, often two, sometimes four Days. But the most distinguishing Sign which I know of, is, That the Urine settles at the very beginning of them; which also is common to Eruptive Fevers: But they are moreover

over distinguishable by other collective Signs, and may be better guess'd at by them. Sennertus only lays, This Fever did not proceed from a Procaturatick Cause, therefore 'tis no Ephemera: But he tells us he cannot argue vice versa. And Walschmidt says, We may guess it to be an Ephemera, or a Diary, if the Persons were well constituted before the Seizure. No Time nor Place is exempt from the Attack, for we have known them seiz'd in Bed, as well as out of Doors.

As to the Danger of a Diary, there is none; for it presently terminates in a Mador: But Mistakes or Misnanagements cannot be answered for; and tis easy for it to be advanced, as I have shewed above, into even a Continual. Vid. Coberi Decad.

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The Cure of it is so easy, that Physicians are seldom consulted about such Patients. However, if any are afraid, by the Violence of the Heat, and Strength of the Pulse, along with Head-achs, that it may degenerate into a Surexis; or, if the Person seized be of an Athletick or Plethorick Habit of Body; Bleeding is advisable to abate the too vigorous Motion, or to prevent Ruptures of the Vessels, along with a dituring Diet of cooling Things: Such are Oatmeal-Gruel, Panadoe, thin Broth, Sack-Whey, Posset-Drink, Small-Beer and Toast with Nutmeg, Wine and Water with a Toast. Claretum Coberi, (viz. Aq. font Cinnam. Sacch. colt. & per Manicam Hippocratis transcolat.) And an Abstinence from Fiesh-Meat till the Sweats carry it off.

If they are not burning, but rather bedical; warmer Diet may be allowed; to bring the Fever to a Balance, rill they Sweat; such may be allowed Caudles of Wine, Broths, (but no Flesh-Mear,) and

even, in Postilential Cases, Wine. [River.]

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If they are infested with Sickness, either a gentle Emetick, or a Cathartick, are indicated, especially if 'tis from Drinking or playing the Gourmand, or at least a Gister may be administred to evacuate share of the offending Matter.

Blisters are of Use, if they are Catarrhous and Hettical; and that they may turn such, who ever did see any Examples of our Feverett, &c. in 1712. can be at no Loss to imagine or know this

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In general; what is given in this fhort Fever ought to be luke-warm, (if nothing contra-indicates;) because, the Crists being at hand, Perspiration is to be promoted, and no Pore is to be shut up from being a Salley-Port to the Perspirable retain'd. Whereas, if the Liquors are given cold, the Pores of the Glands of the Stomach might be obstructed, and endanger an Instammation of that, or some other Part; as is common to Persons over-heated, and who immediately drink Water upon it.

Give me leave to remind you, that Baglioi is of an Opinion, that in the Cure of Diseases, great Regard ought to be had to the Procatarctick Caules. Si Febrim, fays he, ex Infolatione vel hujufmodi externà Caufa productam curandam quis susciperet nullog; habito Respectu ad Causas procatar dicas; per praconceptam Recentium Medicorum Hypothefin non tantum Febres verum etiam Morbos omnes ab Acide pendere. Alcalia volatilia uberiori Dosi prascriberet. ut prasuppositum febrile Acidum infringeret . & per Diaphoresin eliminares, nonne profesto toto errares Calo? Cum Ebullientis ab acceptà infolazione Sanguinis Motus Componendi potius sint per amica Remedia, quam addendum Calcar per furentia Alcaha? Apparente Igitar pro Diversitate Cansarum procatarticarum & antecedentium diversa Facie, Canft inneediara & proxima, in houriendis Indicationibus. Marborum ad illas semper respiciendum eris. Alicer enim

enim trastare debemus Febrim ab Intempestivo Frigore eliter à Crapula, Venere, Insolatione, Animi Pathematis aliisq; Causis productam. And below, Nonne Insaniret Medicus qui ardentem Febrim à nimià Venere produstam eadem Methodo Purgantium, Vene Sestionis, & c. Aggrederetur, qua Ardentes aliis Cau-

fis, Ortum debentes, aggredi folet.

I am forry to diffent from fo learned and laborious a Person as Baglivi; but, Amicus Socrates, amicus Plato, at magis amica Veritas. Indications are to be taken from Permanent Effects: So that if the Cold has alter'd the Pores; if any Liquor has relaxed the Fibres of the Stomach, or over-crouded it; if the Sun by its Heat has curl'd the Fibres too much, or has straiten'd the Pores; if Venery has exhausted the Spirits; these Faults must be amended, because they are Permanent Effects. But it often happens, that External Causes do produce such Effects in the Mass, as require the Use of that very Thing which gave Rife to them: As is frequent in Dropfical Persons, who are enjoin'd the use of Wine, when perhaps 'twas caus'd by that very Liquor: Cold Liquors drank by a Person over-heated, will often produce an Inflammation in the Stomach, which all know requires cooling Medicines: Rheumatick Pains often arise from the Rain wetting us thro' our Cloaths, which after proper Evacuations, we have known cured by the Immersion [ the Topphsoia, or Yuyeohroia. Ardent Fevers frequently depend on this individual Cause; and yet we must cool them. Many more Infrances may be brought to convince us. that the Procatardick Cause ought not to mislead Praditioners to far as to neglect any Remedy contra-indicated by the present Circumstances. Hour ever tis, generally speaking, beleful to judge of the Effects produced: But our Indications ought to be fariber feichd, and from a surer Bottom than it, I men from the Visiations of the Blood and Fibres, &c. which

which are best judg'd of by the proper Symptoms. Vid. The Introduction of the second part of the proper Symptoms was the latents and the proper Symptoms.

Of a Febris Putrida, Remittent, Duvezis, Hellicks,

A Synexis is a Fever with Remissions, i.e. a Febrer where there is constantly a Febrile Heat, (after the first Horror is over,) constantly a Quickness, and Frequency of Pulse; but when the Paroxysin or Exacerbation comes on, then these Heats encrease wonderfully more than in the Remission, and then the Pulse grows stronger and more frequent, and the Quickness is more perceptible. At this Time too, all Symptoms, whether Pains, Fluxes, Vomitings, or such-like, recommence and revive. So that when the Fever continues, and yet the Blood suffers Tides, and shifts from ill to worse, This we call a Remistent Fever, or a Synexis Putrida.

As I have hinted above, it may either be of the Ardent Kind, or of the Hellical: For if, in the Fit, the Heat be very violent, and the Pulie very large and strong, Bleeding is absolutely necessary, and ought to be proportion d to the Strength and Age of the Patient, nay, and must be reiterated, if Occasion requires it. And I say of the Remittent Kind, as Dr. Cole says of the Intermittent, that Blood ought to be taken away in the Paroxysm; for then we can best judge of the utmost Heat, and may better proportion the Evacuation thereby

After which you may give all the Diluent and Acid Remedies to cool the Blood, and so to impede its too rapid Motion, that it may not endanger his flammations or Hamorrhoges: And thus you prepare a readier Way for the regular Dropping of a Sedia ment, and to a Decifive Sweat: Or if a Remission happens, which is not so easy to obtain at first, in the Ardent Kind, when it happens distinguishably,

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then give the Carrex Peruv. at due Diltances and Doses, and continue it to a perfect Cessation of the Fever. In such Fevers the Patients may fit up often

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I know several Practitioners, who upon the Complaints of Faintness, heap upon their Patients Cordials of a Warmer Kind. Tis true, as will appear more at large hereafter, that Deliquia may require, for the present, warmer Cordials: But a Faintness being only a Disposition to a Deliquium, ought to be handled in these Kinds of Fevers by lessening the Cause of them, and by these Medicines you are so far from helping this, that it will be found destructive, by causing an over-bearing Motion, and by over-distending the Vessels, you would cause

very diffinal Symptoms. a sonommons, exil-don't re

Wou must then give them, in their ordinary Drink, some Drops of Sp. Sulph. Vier. Nuri Dulca also Syr. Limon, or any other Acid, to fuch a Quantity as may gratefully acidulate the Small Beer, Barley Water. Wine and Water, or any other small Liquor, by which you calm this violent Commotion I and at last the Unine by this Management (for I am now only talking of the Cure without confidering the noble Effects of the Correx, and which I believe no Practitioner ought to ineglect), will feparate; and then, and not till then, if Occasion requires it, venture upon a little thin Broth, fo far as to support, but not to heat fem, till a regular Crifis. Though I have often known ducky Miltakes at the Stare, by drinking firong Liquors, yet this cannot be drawn into a Precedent by prudent Men, fince there was no equal Chance for fo good an Event.

both in the Paroxysm and out of it, all we can do, tafter proper Evacuations premised) is to give the Testaceous Medicines, to advance the Febrile Heat to such a Degree, as Experience makes it evident a

Crisis

Crisis will follow; to administer gentle Cordials and Alexipharmacks to support the Spirits; and also to apply Blisters, to rouze the drooping Circulation, to evacuate the Serum, and to revulse it from the Head.

If I should here undertake dogmatically to affect the Manner of the Operation of Tellaceous Medicines, I should hazard to answer a difficult Queftion. Tis doubted however, and not without fome Reason, that they seldom pass farther than the Stomach and Intellines: And if we confider. that though these Powders are reduc'd to be impalpable, and 'till they can be broke into no larger Surfaces physically, yet if we then mingle them with Cordial Waters, nay, with Syrups or Oils, (which buoy them better up,) they will in a very little Time Subside. Which makes it probable, that this Sort of Medicines feldom mounts up to the Thoracick-Duct. And accordingly I have found them lodg'd in the Receptaculum Chyli, in a Perfon under an Empyema, who, by the Prescription of a Great Man, had taken plentifully of them; and they had harden'd into so stony a Matter, that I was some time e're I was satisfied what they were : for what the Knife would hardly enter; in a finall Time, dissolv'd and subfided in the Water.

If there were no Difference between the relative and absolute Gravity, or if there were no Refifting Medium, it would be easily granted that Pearl would fettle presently; but as the Mathematicians shew us, there are Such, and that a Body gravitates with its Excess of Gravity above the Lighter: Let us then suppose with them x + y to be the Heavier, and x

to denote the Lighter; then  $\frac{x+y}{x}$  =y: Thus it is, that Mercury is specifically heavier than Water, as 14 to 1; therefore it gravitates by an Excess of 13; thus

thus Pearl is to Water as 2, and 51 to 1; therefore it gravitates with an Excels of Gravity of I and 51 above Water. Enough of this may be feen in Dr. Wallis, Pere Thomas, and F. Rohault, p. 194. Part 1. c. 16. De Corps durs plongez dans des Liqueurs: We will add to this, That the Resistance to Descent encreases, upon dividing a Body into Wher Surfaces: so that Gold-Dust itself will swim for some time. It is upon this Head, that these Powders are long a fettling to the Bottom: Hereupon I must frankly own, I hardly believe they ever reach the Blood; for that we see they are never pulveriz'd fo fine, in the Shops, as that the Refistance of the Fluid. becomes near equal to their absolute Gravity: Hence before they pals from the Stomach, they (from this great Disproportion) subside, and are carried through the Common-shore of the Intestines.

It may then with Reason be asked. How Steel, Mercury, and such heavy Bodies produce their Effects in the Blood? We are certain that wonderful Effects are produced by these Medicines given Inwardly. Tis not sufficient to say that the Gravity of the Fluids increases upon the giving these Medicines; because I know no Trial, as yet, made on these things: Indeed, where they may be dissolved in the Stomach, or Liquids taken, I find no Difficulty to yield they do nor do I here talk of particular Menstruums that can make 'em liquid; and the Tincture drawn by the Juises of the Stomach from these Medicines, may be one Cause to produce these stupendous Effects, by the same Mechanisin known in Menstrua. Moreover, without pronouncing, we may probably fay, that perhaps these Medicines rob the Contents of the Stomach of their offending Acidities, as we fee they do in Vinegar, and thefe Contents constantly taking Journey into the Mass, may thus prevent future, and dissolve the present Combinations which prove a Bar to fuch a Motion

as will be sufficient to throw off what is noxious, and so are preparatory for removing the Obstacles that hazard a good Separation; and thus they eventually contribute to a Crisis; for the Juices of the Stomach being impregnated with them; they, thus changed, may invigorate the Fibres and the Blood's motion and supply Matter for Sweats; or perhaps, the active Principles being far divided by too great a Quantity of Serum, they may absorb so much of It as to make em attract each other more forcibly; and thus the Blood will move on in a just Tenour of Motion, and exclude the noxious Particles throthe Pores. But it is trifling to enquire so nicely into these Particulars, which may remain Secrets never revealable, and therefore I shall proceed.

The Remedies are the following: Puto. Margariti oc. 69. Bezoar priental. occidental. mineral. Lap. de Goa, Contrayervá, Antim. Diaphoretic. Echel. C. Corn. Cerv. Calcinat. Corall. Rub. Cinnabar. Nativ. artificial. and such-like, which are to be varied

according to the Patient's Palate,

R. Pulv. Marg. ppt. 3j. Oc. 69. 3ß. Bez. orient. gr. vj. Conf. Alcherm. sine Mosch. 3j. Syr. Caryoph. q. s. m. f. Bol. quem repetant intra Horas 5, vel 6. superbibendo Cochl. iv. fulap. cujusvis Perlati.

R. Pulv. e Chel. C. Jj. Sál. vol. C.C. gr. j. Conf. Alcherm. sin. odorat. vel Theriac. Androm. (modo vullo Symptomate Comotoso contraindicetur) 38. Syr. Aurant q. s. m. f. Bolus capiendus ut supra.

The Practitioners in Holland make much Use of Antimon. Diaphoretic. in their Bolus's; for they, living in low and wet Grounds, may make free with fiery Absorbents than we date.

HOE

Re Ag. Lett. alex. 3iij. Meliff. 3vj. Menth. 38.
Epidem: Ceras. n. a 3j. Marg. ppt. 3j. Sacch.
Crystal. q. s. m. f. Julap.

R. Aq. frigid. Saxon, Zij, Borneg., Ziv. Cinnan.

aq. h. Zj. Conf. Alcherm, Zj. Marg. ppt. Dij. mod.

ten Zulapd behivib at anied selepant with a si

R. Aq. Fragor. Ulmar. à Ziij. Therinc. J. Zj. Scord. Comp. ZB. Syr. Aurant. ZB. m. f. Julap.

After we have given these, or such like, for some time, and by 'em have rais'd the Rulse, recruited the Spirits, invigorated the Motion, and advanc'd the Hear to a sufficient Degree, 'tis then our Business not to Tamper farther, but to keep it up to this Pitch, without letting it fall or sife, till the States, when the happy Minute comes to dismiss the Fever through some of the usual Outlets, and thus reinstates us.

After the Administration of these Medicines, 'tis pleasant to observe the Varieties of the Pulse and Urines; for as the one advances to a just Pitch, the other changes at the State, from Turbid, Milky, Thick and Muddy, to a good and laudable Sediment; and the Symptoms in Proportion to this,

vary, and either diminish or cease.

Some Fevers are of a mix'd kind; for at first they have weak Pulses, and moderate Heat; and yet a little after they turn Ardent, with Phrenzies: We may guess at such Fevers from these Collective Signs, viz. Surfeits, Youth, an oppress'd Pulse, (viz. sometimes Great, sometimes Small; now Weak, then Strong; now Quick, then Slow;) a particular Warmth beyond the Standard; violent Headachs, Red Eyes, a Sanguine Complexion, Red Utine, a Plethora; a strong Locomotive Faculty; and from

from this, that nothing has preceded, that could Weaken; and upon these Accounts we may venture to make Use of Evacuarians by Bleeding, and what is indicated besides, as above. I much fear the Neglect of understanding this Matter, has given Occaration to many satal Mistakes.

This may farther be added, that Putrid Fevers are not Mortal, 'till they turn Continual, which however, any Mismanagement will easily do; and therefore prudent Care ought to be taken at the Beginning, that Proper Evacuations then be made, the neglect of which, they too-too often suffer for, in

the Progrefs.

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As to the Administration of the Cortex Peruvianus in these Fevers, no Body ought to be startled at Baglivi's ill Character of it; for it as certainly Cures Remissions, as Chalybeates do a Cachery; but I hope no one expects an infallible Remedy: And as it is not nieful in the Ardent Kind at the Beginning, more than 'tis in a Malignant; so he may fpeak the Truth in crying it down in Italy, if their Fevers are always Ardent: But if Experience be a fufficient Argument to reject it; the same will be Proof enough to retain it. In short, if the Cortex be well chose, if it be given regularly, and to a due Quantity, there is not a nobler Remedy in the World, for all Remittents, hitherto: Indeed if we fail in any of these Heads, I don't much wonder if the Success be proportionable. I have in this far'd, as many of the Faculty have done; and upon a Change, have fucceeded accordingly; but in none more confpicuously than in the Eldest, and then only, Son of the Right Honourable the Lord W-n; who being seiz'd with a Synexis, with very fair Remissions, in which he was Comatous in the Fit, with an Augment of his Heat, and a quicket and thronger Pulse: After some Evacuations, before my Attival, I gave him about 3vj. of it, (which to a Child H 2

Child of Eight Years, was a large Quantity) to no Purpose; but finding his Remissions darker, I suspected the Age of the Cortex, and therefore I sent to the Apothecary for a Quantity to chuse on which he and myself pick'd; He powder'd it, and 'twas given to 3j. at a time; the Fits immediately return'd flower; and with 3ij. or little more, they went off quite, to the Pleafing Admiration of the Family, and a Conviction of the Cause: which I here the rather take the Liberty to mention, because a Gentleman of the Faculty of our own Nation. feems, in a Tract, not to value, whether it be Putrid and Annose, or not; which is evidently a great and dangerous Mistake. I shall only take the Liberty to annex one History more, tho' 'tis now felfevident, by every Practitioner's Observation, how useful it is. I was call'd to a Gentlewoman who had a Vertigo, a quick Pulse, and Heat upon her; the was Vomited by her Surgeon with Vin. Benedid. and Sal. Vitriol. (after 8 Ounces of Blood drawn off:) The following Day, (June 4. 1701.) I was call'd in; and found her vomiting every thing the took; her Pulse was weak, tho' quick; her Heat was moderate, and her Urine red. I order'd her Stomach to be wash'd farther with Chicken-Broth, and then to take a Pearl Julep to relieve her Spirits, and at Night prescrib'd her Riverius's Mixture of Succ. Limon. and Sal. Ablinth. After which, the Vomited no more, but flept quietly. The 5th in the Morning, the was much Refresh'd, and her Pulse was not quite so weak. In the Afternoon her Vomiting return'd, and her Spirits were much depress'd (as was evident from her weak Pulse and Swoonings.) I order'd the Repetition of the Ant-emetick Mixture; and a Pearl Fulep for her Spirits, with a little Treacle-water, Agua Last and now and then if Faintness urgid, she was to take 10 Gutt, of Sal. Vol. Oleof. in the Julep. The 6th, the

the Vomiting ceas'd, and then a Head-ach came on violently, with her Pulse wonderfully stronger; infomuch as I judg'd it necessary to take away some Blood, (3vj.) and thus I obtain'd a Remission; upon which I gave her ziv. of the Decoction of the Cortex, and continu'd its Use every 4 Hours in the Remissions; (and if she were Fainty, that she should take some Sal. vol. oleof. in the Julep, for her Pulse then fail'd.) All that Night she slept very well, was free from her Head-ach, but was not without a Heaviness. The 7th, she begun to regain her Appetite, her Urine began to drop a Sediment, her Temper grew Natural, but yet her Pulse was Feverish, and therefore I continu'd repeating the Decott. Febrifug. in the Remissions. The 8th, her Temper, Pulse, Urine and Appetite, began to return. The 9th and 1 oth, she, (tho' she Vomited the Decoction) upon Repetition, grew well. I repeated it within 10 Days, as is usual, and she now, which is 17 Years fince, continues Healthful.

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More Histories, in Vindication of the Cortex, wou'd prove too tedious to any common Practitioner, fince daily and undeniable Experience convinces us of the Truth here laid down; but I must take Notice first, that, if they are not called in too late, they ought to Bleed, Vomit, or Purge, (with Lenients), before its Administration. As to the giving it by Glysters (according to Helvetius's Method), 'tis very useful, in Children especially, who nauseate its Taste, and ought to be given to them to 3\beta. or more at a time out of the Fit, but to 3\ill. in Adults; and after one is rendred, it must be re-

peated till the Fever goes off.

clies as with oward and cor-

I shall moreover add, that I have found this Repetition useless, if while you are using the Cortex, you give a much larger Quantity than what will do. I shall therefore proceed to the Hedick.

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make their to six swim:

#### COROLLARY vindois

sie Vomiting eastle and then a Head-ach each each

From the Affinity there is betwixt a Remitting Fever and a Hellick, I take the liberty to subjoin it.

The Hedick has its Exacerbations as a Remittent has; the Sick never want a Heat, tho' it abates at certain Times, as in the Syneyic; but then the Blood is overstock'd with an Acrimony of a particular Stamp; the Sweats that come on, do (as in the Syne yhs) abate the Hear; yet still the Fund being almost inexhaustible, they never can throughly exterminate the Matter; for the Fits are renew'd afresh, and the Sick are drain'd, and die in a Marasmus. This is call'd Hellica Simplex: The Cause is frequently in the Parts, and then 'tis a Syptomatical Fever, and this is common in Confumptions. I have seen it after the Small-Pox, from Scales lining the whole Intestinal Canal (of which in Sec. de Cholera) and this is call'd Hectica Putrida: Indeed, Hectical Perfons have no Horrors, as in the Synexis, but often complain of a Chilliness: However, 'tis with Reason annex'd to a Syne wis, because of its Exacerbations and Remissions: But in Hellicks, thefe Exacerbations and Remissions are generally after Meals, when they have a sharp Heat on 'em, a frequent and quick Pulse; and Sweats. Diarrhad's, or Urine, hurry 'em into an Arrophy. Floyer observes the Pulse to have 100 Stroaks out of the Fit, and 120, in one.but all I si ensure

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After the Blood is well Corrected, give the Powder of the Correx to a Dram, thrice a Day, to abate the Fever-fits: These Medicines continu'd for some time, with the usual Cantions, will have their desir'd Effects, as I have frequently experienc'd.

Interfion in cold Water, which is lately revived, is also very good in this Case, if the necessary Cautions be observed, (viz. not to venture on it, if any Viscus lai ours under an Incurable Difforder, or be faulty, not immediately after a Debauch, not in Defluxions, nor in weak Persons,) you may stay in the Bath a good while, the Design being to allay the Heat.

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give all the Obtunding Medicines, as in the Hellica Simplex; moreover other Indications arise from the Nature of the Case, such as giving Opiates at Night, to allay the violent Irritation of the Cough; Issues are made to revulse the Humours; Blisters are applied for the same End. But this Discourse belongs no farther to this Head, and therefore I shall

pass on to the Intermittents.

Intermittents are cur'd in the same Manner as Remittents are, with Regard to their Shifting: But 'tis observable, that without due Evacuations made, the Fever is apt to return; nay, if the Blood be remarkably out of Order (as it often is in some Tertians, but more-especially in Quartans); and if it is not amended too, the Ague often returns. nay, and even sometimes cannot be taken off at all by the Cortex, till this State of Blood is very well chang'd and corrected. After proper Evacuations. (and Corrections, if requir'd) give the Correx, from 5 gr. to 3j. at a Time, every 4th Hour, during the Interval of the Fit, till it returns no more: Thus, all Agues (whether Quotidians, Tertians, Quartans, or others, compounded or suppos'd so to be, of these) are carried off, unless fome Idia-Syncrasy intervenes; for then you must, instead of the Cortex, substitute some other Antefebrile Medicines; such are, Mistura Dekkeri Antefebrilis (viz. R. Cort. Lign. Guaiac. Fraxin. 3 3j. Extratt. Rad. Angel. Gentian. Antimon. Diaphor. Sal. vol. Sal. armon. a 9j. Myrrh. 31. m. f. pulo divid. in Chart. No. viij.) or Pulv. febrifugus Fulleri (viz. R. Sal. absinth. 33. Antim. Diaph/3j. Flor, Chamom. 3ijs. f. pulv. pro 8 Dofibus.) Many have cur'd Agues with Allum Di. and Nutmeg mix'd, and given every 4th Hour, (the Natmeg, in Ration. Aluminis Subdupla.) I suppose Wainwright gommends Serpentaria Virgin, to be us'd with the Conrex, as Bates does in his Putofebrifug cert. which may do well, especially if we want Correctors of Crude Humours:

Humours: The Decollum amar. alterans, is also commended: But if the Cortex will do, why should we have Recourse to Medicines that fail a hundred

times where the Cortex fails once?

As to the Reasons of the Operation of the Cortex; 'tis Trial convinces us, that if you Bleed on it, the Blood will not Coagulate; fo that if the other Medicines, v. g. Oc. 69. Sal. armon. Sal. absintb, and fuchlike, can hinder the Coagulation of the Blood, and are given in these Intermissions; we may conclude, without the hazard of being reckon'd hafty in our Opinion; that what can hinder the coagulative Principle of the Blood, can stop the Rigors, can occasion an equal Protrusion, can interrupt its Shifting, and occasion it to move on in the same Tenor as in Health, and can prevent a Fit, altho' Contraction of the Vessels and a Precipitation of Humours cure Agues also: However, I always talk with reference to proper Evacuations, to be premis'd, if possible, as well as proper Alteratives, if Time be allow'd us to act; but Prudence will dictate its immediate Administration. where 'tis not in our Power to proceed so regularly, for fear of the Loss of Time.

#### Of Continual Fevers.

Having now spoke of all Fevers that shift, and which either Intermit, or Remit, I shall speak of the Continual ones, (Synoxoi;) by which I mean Fevers that are always the same, that never shift; the Patients are not better or worse, they have no Exacerbations or Remissions; their Pulse, Temper and Order is equable, and the Blood always moves on in the same manner; and as these argue a plenty of microse vooteon, so are they of much worse Consequence than any of the former, and prove too often satal. And as in the foregoing Paragraphs, I have provid Them of two Kinds; so is the one Sort of more

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fatal Consequence (generally speaking) than the other; for its more hazardous to labour under a Penury of Spirits, than too burdensome a Quantity. Hence Galen says, Ex Repletione Convussio Samabilis of per Evacuationem: Ba vero que su ex Inamitione of Nervorum Siccitate non facile admittit Curationem; which Sentence exactly quadrates with what

may be faid of our different Synoyol. O 3.5 2000

It must then be allowed, because all Practice confirms it, that Continual, as well as other Fevers, 16 thin either to the Causus, or the Hetlick: They in the more Southern Parts of the World, and nearer the Line, are more subject to the Former, and we Northern People to the Latter, (at least most frequently). And hence it is, that in those Parts they frequently die in two Days, nay, often in four and twenty Hours; for that the Blood fo over-fivels its Limits as to rend the Vessels, and occasion either Hamorrhages, of Effusions into the Cavities. Galen. de Method. medend. L. 9. expresses the Method of Cure thus, Continentium, (and the fame holds good in Continuals, and even in the Pestis, according to Dr. Sydenbam) Febrium Prasidium maximum, si modo Vires valentes sint Sanguinis Diminutio vel usque ad Deliquium Animi -: Ubi borum (viz. valida Virtus & Ætas) alterum baud satis respondet; Satius est, quantum satis visum fuerit, tantum Principio detrabere: Quod defuit, Iteratione supplere. This Method they follow much in the warm Ifles, till they have brought the Motion within compais, as I perceiv'd from a Relation of mine, who had fived for some Years upon them; and at the same time they administer all the Cooling Medicines to allay the Violence of the Fever, after which, they give the Cortex, if it turn Remittent: And thus they Chie thele Fevers. The Turks in their Plagues we Lemons plentifully. And Wocker, Theaking de Limoall's, Tays, Item & ad Pefillentes Rebres & eas que Con-

## A Critical Effay on Fevers. 107

Contagione non vacant, Febribus acutis & Contagiolis mire succurrunt. Which demonstrate to us, that they labour under the Ardeni Kind: and our Sydenbam, speaking of the Pessis teigning in London in 1666, says, Febris ardens white a Symptome sum Zordegun stipata indesinents Agres diversit; he treated em with Bleeding to large Quantities, till he seem'd to be blam'd for the Want of Success in some few. So that, from Anthonity, we conclude, that when a Continual Fever seless any Person with the Symptoms of Ardency, tis too plain to want farther Proof, that the Cure is accomplished by Bleeding and the Cooling Methods, in Proportion

to the Necessity.

They who labour under the Hellick Malignant. have a depress'd and weak Pulse, and their Heat & not very perceptible. If the Fever is accompany'd with a depress'd Pulse from its first commencement; the Physician ought to be very circumspect as to the Evacuations which are to be made; for some are always then necessary; and which of em are most conducive, you will be well informed of, in the Recapitulation: But fuch who have labour'd. for forme Time, under this Condition, and have there by become languid, comatous, and weak; its not in this Cafe, very likely that Nature. (pardon the Expression) will ever free it self of its Bosom Ene my (the Putrid Particles,) or ever exterminate it thro any Part: And thus the poor Patient labours under a Train of ill Symptoms, which take their Rife from the most dangerous Cause in a Humane Frame; I mean, an Exhaustion of Spirits in the Brain; for now Subsultus Tendinum, Coma's, Coneb Longues, involuntary Estusions of Urine and Faces, the Pulses obscure and formicant; and Pulsus con-dervati come on, and uther in Death. In this Case the Affair stands thus: As the Paucity of Spirits are

concluded on from these foregoing Symptoms; so tis certain that the Circulation will, in Proportion, be much retarded, and every Evanescent Artery or Capillary will be a Bar to its Motion, which the Quantity of Spirits cannot furmount; for now they fail to be so dense: So that the Trajection thro' the Vessels ceases, the Stroaks of the Embolus begin to be too feeble to propell the Liquids in the Veffels to the Extremities; and thus at first the Blood will cease to move in them, and the Pulse will not be felt to beat, so that Death has begun there; for when the Immitting Force cannot conquer the Resi-Aances, there is no Circulation; and where the Circulation ceases, there is no Life. And as each Moment draws off Spirits that are never supplied, no wonder it the Fluids stagnate gradually higher. till at last the Blood in the Heart stagnates too: and then arrives that dismal Moment when the Thread of Life is cut.

They whose Fortunes will not allow of a regular Physician to attend them in the Course of a Fever, at these last Minutes call them in to be Witnesses of this Catastrophe, when God knows how little emains to be done: For, notwithstanding all your Endeavours, the Blood, in some Persons, can never be made to keep on the Circulation. Whether, at this Time, the Blood it felf grows fo gross, as not to yield to any, even the strongest, Shocks of the Fibres to propell it; or whether now the Fibres, in fome Persons, may not grow Paralytick, so as not to be obedient to any, the most potent, Applications, 'tis equal: For either are of the last ill Confequence; fince now approaching Death makes a cautious Person unwilling to act, when the Actor must be blam'd for the Want of Success, though the Recovery be an Impossibility. You are obliged here to give the strongest Alexipharmacks, and to apply Blisters and Emplast. Solearia, to promote the

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the Circulation, till some lucky Chance happens that the Particles, now fettling upon the Organs, and creating the difinal Symptoms, may be thrown into the Mass, and kept moving; and then, by adding Spirits too, the morbid Ferment may be precipitated, or be expell'd, and a Victory be gain'd. It can hardly be imagin'd what wonderful Effects have been wrought by these extreme Remedies. when the Physician had even little Reason to promife himself any Success from them. Which I mention, in order to embolden the Application to them, as long as the Patient's Friends will encourage us to proceed: For I must own, that if Involuntary Effusions of Faces and Urine, and if the Coldness of the Extremities, with a Failure of Pulse, and the Loss of Motion in the Extreme Parts, can be cured by these Methods, as I have experienc'd they can; why should we despair or cease to al?

Here we give Pulv. Rad. Scrpent. Virg. Camphor. Sal. vol. CC. Sal. Armon. vol. Sp. CC. Theriac. Adrom. Elest. de Ovo. and such-like, frequently in a Day, in a watry Vehicle, to add Motion to the Blood, to recruit the drooping Spirits, to stimulate

the Fibres, and evacuate by Sweats.

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Tis customary with Authors to blend Stypricks along with Alexipharmacks, and they look on them as proper Antidotes in these Cases: Such are Bolus vera, Terra Sigillata, &c. I have all along shew'd that there are two States of Blood in Fevers, and as Authors have only in general told us that they are proper in malignant Fevers, to preserve the Crasis of the Blood, let us see in what Manner they do act.

Their Effects then are to clog and arrest any rapid Motion, (by having Particles of less Agit ation than those of the Blood, &c.) and to unite and agglutinate the Particles, too much dissolved, by their ramose Parts: And these are the Effects they

have

have on the Blood, The Power, they have on the Fibres, is to thrink and contract them into a natcower Compass; from whence their Diameters are effend. From the first Effects they may properly enough be given in the Ardent Kind of Malignants. but if we confider their Power of contracting the Vessels, we may conclude them also good in the Hettical Malignants: For 'tis a Maxim known in Hydrostaticks, that Fluids, Cateris panibus, run swiftlier through a small Tube of the same Astitude, than through a larger. In Malignant Fevers, with a burning Heat, as I have feen fometimes, along with Hamonrhages and Bloody Urine, or Diarrhag's. they are the proper Specificks. What we may fay then, is, that in the Ardent Fevens they may be giwer in proper Dofes, as well as Acids, to impede the violent Motion: But in the Hactical, they cannot be fafely given; unless they be blended with those of the volatile Kind; by which Contrivance the Blood may receive little Harm, but the Veffels much good; the one may be attenuated to a proper Degree, and the Contraction of the Vessels may contribute to an equal Protrugen of the Fluids: So that we fee, though they cannot have any Effects by throwing of noxious Matter, yet they may have other Vertues equally advantageous, by accidentally furthering a critical Evacuation in A regord as men't

To determine the Number of Bliffers, you have no other Criterion to tely on, save the Pulse and Heat; and not only these, but also all Internal Medicines are to be admitted or rejected by these Marks; for tis equally dangerous to raise too violent a Commotion, as not to exalt its Motion to

the just Standard not on our made afferd ried T

Before I proceed to the Subdivisions of Continue als, I shall here remind you why the Cortan is not used in the Continual Fevers, which is easily answered by the Management in Intermittents and Re-

Remittents. For I have before taken Notice, that all Fevers have their Horrors, Hears, and Declinations: And as the Fits of an Intermittent, are formally distinct Fevers: so do Continuals resemble one Fit of an Ague: And as the Corvex cannot be given either in the Fix of the Intermistent or Remittent, at least, with any Success; so the Continual being but one long Fit, it cannot be given in the Puroxy/m: But as it serves to prevent the Return of the others; so may it prevent our falling into Malignants, if given timely, before our Seizure, and by the way of a Preservative.

filential, and Peffis, as so many different Degrees of this Continual; which are thus diffinguish'd.

The Malignant is, when a Continual Fever seizes us with an equable Pulse and Heat, with Symptomatical Sweats, Dejection of Spirits, Delivia, Vigilia, Coma's, Tendinum Subfulsus, Union strandined, Dty and Black Tongues; and these are the

First Degree of CONTINUALS.

Hope aruns

2. The Pestilential is, when these same Symptoms supervene with Spots, Petechie, or Marbillar Essone scens and they become Epidemical, and destroy many by their more incorrigible Qualities. Vid. Vidius tells us, howwolus — communiter wagantur Est plures eodem tempore occupant, non tamen onnes wagantes communiter dicuntur Resilentes, sed illa duntaxat que prava sunt, & plerosque interimunt corum quos artingunt. And Doleus in Feb. Restit says, Multi sunt qui Pestem à Febre Pestilentiali distinguent, sed sunt tantum diversa Nomina circa diversos Gradus.

fame Symptoms, is so violent, that hardly the One-fourth of Mortals escapes, which they frequently do, or die, in Four Days. Etmull, air, Omnium maxima of Possis en vulgaris quam nune Bubones,

nune

in fummum Vita Periculum conjicit.

Tis plain therefore that these Three Subdivisions of Continual Fevers are different Degrees of the same Species, and are only distinguishable by the Degrees of Danger and Epidemicity. In short, where-ever any Eruptions appear, and the Fever is very Mortal and Epidemical; and at the same Time, Trade with Infected Places, brings in Goods from them, without the due Quarentines, 'tis a very suspicious Case; and nothing but a superlative Ignorance, back'd with Avarice, can blame the Suspicion. Willie says, Interdum nimis securi Pestilentiam Ratione Symptomatum Febris communis amulam contemnentes Pericula nostra, non niss service deprebendimus.

All Sorts then of Continuals may belong to the Ardent or Hedical Species, as may appear by Practice: and Sydenham proves and shews the Pestis and Febris Pestilentialis of 1665, 1666, to have been Ardent: for he says, Primus insultus Rigorem ac Horrorem quemadmodum & Febrium Intermittentium Accessiones, serè perpetuum babet Comitem, mox Vomitus enormes, Dolor circa Cordis Regionem, ac si Torculari premerentur, Februs Ardens, usitata Symptomatum Sovolegus, slipata, indesinenter Agros divexant, donec aut Mors ipsa, aut benigna Bubonis vel Parotidis Eruptio, que Materiam morbiscam foras ablegat, eos ab luttuosissmo Discrimine liberet. And he mentions some Instances.

As to the Hellical Sort, read Hodges de Pest. Lond. 1667. where he says, Calor mitis in Puella & admodum blandus, interiora utique manifesto non conflagrarunt flagrarunt Incendio, — E contra vero omnia tam pacata, tam serena, perinde ac si nulla Agritudinis Procella factaret, nedum impenderet Vita jactura, revera mihi non constitit de Causa Agritudinis quam simulasse Morbum suspicabar, donec Thorace nudato in dubia hic illic Stigmata pro More compuncta Partem Sensu vacuasse indicaverint, merito habita properantis Fati Arrhabone, eadem nimirum Nocte Puella expiravit, vix dum vel suo, vel astantium Indicio valetudinaria. And Diemerbroeck in Pest. Noviomagens. Hist. 120, & ultim. says, 'tis sometimes with-

out a Fever; and so does Barbette.

Having shew'd then that these Fevers may be either Hellical or Ardent; let us fee how Authors treated these Persons under the several Sorts. They, who found them of the Hellical Kind, treated their Patients with warm Alexipharmacks. Thus Hodges commends Sp. CC. Dij. vel zj. ex Aq. Epidemica. Barbette praises his Pulv. Alexiterius, viz. R. Rad Contrayero. 38. Petafitid. Tormentil. Enul. Campan. 31. Raf. CC. Ebor. a 31. Corall. rub. ppt. Div. Cinnam. acut. 3ij. Antim. Diaph. 3B. m. Diemerbroeck makes use of this: R. Conf. de Hyacynth. Sal. Scord. a 91. Sal, Card. b. 3B. Theriac. Androm. Diascord. Fracaftor. a Bij. Aq. Theriacal. & Card. Ben. a 3j. Ol. Vitriol. gt. xij. m. f. Haustus pro Sudore. Helmont de Peste commends these Seven, Hypericon, Vincetoxicum, Enula, Dictamnus, Aristolochia, Laureola, and Raphanus Sylvestris; as also Common Rue, Zedoary, Scordium, &c. ad Argument who

Sydenbam having describ'd his Pestis as of the Ardent Kind, did accordingly Bleed his Patients plentifully; and he mentions one who us'd to Bleed ad Deliquium Animi (which is Galen's Method hinted at above) successfully: And he also kept 'em under a cool Regimen: 'Tis true, that he did afterwards alter his Method for a very different one, and yet succeeded; having after one Bleeding, gi-

an Argument who gave the most faithful Relation. Thus we see, that the different States, are by all differently treated; but that, as in Pestilential Cases, Crises are not casely obtain'd; (for that the Humours are not Concoctible,) we are obliged to invert our Methods, to avoid a worse Chance.

only Dr. Sydenbam having taken up the Method of Diaphoreticks, as well as Dr. Hodges; to me, it is

Tis observable that Persons, Quorum Res est angusta Dominiare easier cur'd of these Sorts of Fevers, than such who have fed plentifully, (and it may

may be that the Plenitude, in fuch oppulent Persons, overstocks the Blood with a great Heterogeneity, not to be met with in the Constitutions of the Meaner Fry); and fuch consequently require fewer Evacuations: Whereas I have known Numbers of the richer Sort who underwent a harder Fate, for want of Room for fuch Evacuations; or because the Evacuations made, have neither been proportion'd to the Indication nor to the Strengths of the Laborants: But let fuch thank their own Credulity, in leaving this principal Concern to the least Knowing. Tis thus that I have often feen Poor Persons, labouring under Petechial Fevers, recover without any great Apparatus, fave some gentle Evacuation proper for the present Circumstances, the Pearl-Juley, and some nourishing Chicken-Broth; which do more certainly produce their Effects on them, (as being feldom us'd to 'em,) than on the Rich. I would have it, however, remark'd here, That Young Practitioners will often be terrify'd, in Vifiting the Poor, by mistaking Common Fevers for Petechial ones; because of the Flea-bites: Which need be no farther mention'd, fince this is eafily discoverable by a Black Speck in the middle, which the Petechia have not; and that they disappear; but that the Petechia continue constant, or at least, upon retreating, produce dangerous Symptoms. om supervotes for inter-

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# CHOAP. IV. sedice of

## Of Eruptive Fevers.

I Have already call'd these Fevers by the Name of Neutral, because they are not always of the fame Species, but are sometimes accompany'd with an Intermitting, fornetimes with a Remitting, and often

often with a Continual Fever, so far as to be sometimes Pestilential, as they have been through most

Parts of Europe for these fix Years past. I of the

They are Fevers in which we expect a Crisis, by Eruptions on the Skin; (fuch are the Small-Pox, Measles, Scarlet-Fever, Rubeola, Crystalli, Rash or Febris Miliaris, &c.) Besides the ordinary Symptoms that attend other Fevers, as Head-achs, Vertigo's, Inclinations to Vomit, Sweatings, Thirst, Inquietudes, Vigilia, and fuch-like: In these there is also superadded a certain Oppression on the Breast, which is a distinctive Sign that ushers in these Fevers. And 'tis observ'd by Physicians, that whenever there is any Tendency from the Center to the Circumference, that then the Patients complain of Oppresfions, Loads, and inexpressible Ueafiness that chiefly affect the Breaft: And whenever the Efforts made to throw this offending Matter off to the Cutis, succeed: then, and not till then, that Uneafiness vanishes. This Oppression is the usual Pracurfor of all Crifes, even in Common Fevers: And as in these Eruptive ones, the Crists is not very distant from the Beginning, so the Oppression is at the first Seizure; whereas, in the Putrid Fevers, the Crisis succeeding the State, 'tis later observ'd in 'em. But if this peccant Matter is not fufficiently thrown off; then, instead of Ease, by the partial Eruption, fome dangerous Symptom fupervenes: For where the Regular Eruptions are by any bufy Method retarded, Symptoms are usher'd in upon the Parts: so that then they are afflicted with Colicks, Deliriums, Coma's, Peripneumonys, and many more fuch; and the Fever is term'd Anomalous: Now this may happen in any Stadium; and therefore I wou'd have it remark'd as an Index of an Irregular Eruption, Maturation, or Declension.

I shall add no Reasoning concerning the Nature of these Eruptions; since the Patient's being affile-

ed with all the Kinds of Fevers, argues that the fame Causes which produce other Fevers, do also produce these, only that the Qualities of the Blood are of a particular Stamp for creating Eruptions:

therefore I shall proceed.

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These Fevers, then, have several Stadia, as well as the others; but in These they acquire not the ordinary Appellations of Initium, Augmentum, Status, (which is follow'd by the Crisis,) and Declination; nor do they follow their Order. The First Stadium is call'd the Apparatus, which is the Space before the Eruption: The Second is call'd the Crifis, and is all the Space from the first Appearance of any Spots or Pustules, to the complete Eruption of All that are to appear: The Third is in feveral, Inflammation and Suppuration: The Last is, in all, call'd the Declension, and is that Space when the Pustules scab, or the Spots scale off, and when all Symptoms (if Regular) disappear. The Pestis might be, in regard of its Eruptions, referr'd to these Fevers; but because the Pestis is always a Continual Fever, and these are often far from it, I thought it best to place it amongst the Continual Fevers.

If then the Symptoms of a Fever begin; if that Season produces certain Fevers that are of this Stamp, we may guess them to be of this Eruptive Kind. But in a more particular Manner, if Loads on the Breast, Coughs, or Asthmatick Breathings afflist the Patient; and if the Urine settles with a concotted and laudable Sediment : we may almost pronounce, that some Eruptions will follow: For 'tis observ'd, that Urine settling the First Day, the Crisis will be on the Fourth. Galen de Crisibus, Lib. 1. p. 628. 1.

Our Business is, next to find out the Species of the Fever, and the Manner of Seizure: As, whether it be of the Intermittent, the Remittent, or the Continual Kind; whether it be of the Ardent or Hetti-Morr

Hellical Stamp; what Habit of Body they are under. If the Fever is of the Intermitting and Ardent Kind, and the Patient of an Athletick Habit, whatever Species it retains to, you must first Bleed in Proportion to this Ardency and Strength, and muft repeat it, if any Occasion urges, and give all the diluting and cooling Drugs, as has been hinted above. If the Fever be of the Hellical Sort, give, in the Fit, the Testaceous Medicines in Bolus's and Juleps. But in the Intervals of the Fit, the Cachexy must be evacuated by gentle Lenients or Vomits, if indicated, to cleanse the Prima Via, no Others being proper at this Season; (the Cristis being so near at Hand); and the Regimen must be such as before-nam'd; and then the Patient is to be left to the Chance of what follows, which generally is a good one; such Fevers mostly producing distinct Eruptions. In this Stadium the Cortex is prejudicial, as I have experienc'd in a Gentlewoman, who labour'd under the Febris Papillaris, and had the Cortex given at the very Beginning: It occasion'd a very irregular and odd Fever; for some Papilla which appear'd lively one Day, disappear'd in the Night, with an unconcocted Urine, and a dry Tongue; and others repullulated, and disappear'd, shortly after, with Delirium's. And thus the Struggle was continued fometimes with promifing, at other times with desperate Symptoms, for 20 Days; and and was abated gradually by Sweats, but at last, most apparently, by some Stools, with a concocted Urine So that we fee, though it has the Power to hinder a regular Eruption, yet it does not prevent the ill Effects from the Recention of the putric Matter lodg'd in the Sinus of the Blood. ther this Sort of Compositum is of too strong a Nature to be curb'd by it, and how, I shan't now dispute; but we find that even the greatest Patrons of the Cortex don't espoule its Use in this Stadium,

Mort, p. 134. de variol, inquit. In Suveyêi autèm variolosa, --- Natura propriis Viribus instructu Victoriam Crisi persettà in Stadio proximo Sponte, sine Ingrati hujus Remedii Ope reportatura est. And Sydenh. in Schedul. Monitor. de Nova Febris Ingressu, Ann. 1684 ait. Eodem Remedio (Cortice, viz.) hanc etiam Febrim (viz. petechialem, miliarem) adoriebantur. Quod quidèm licèt fudicio Rationis suffragante tentarent (quia Intermisit vel Remisit) non tamen aquè feliciter illis cessit atq; prioribus illis Annis (à 1677 ad 1685.) plerumq; cesserat. Mihi enim, quantum potui, deligenter perquirenti, Compertum suit, etiàm magnam Corticis Quantitatem exhibitam rarissime Ægrum à Morbo liberasse.

What is here advanced about the Intermittent, will also hold good, if your Patient be seiz'd with the Remittent, which indeed is more frequent than the former; and as the Eruptions which succeed either of these, are, of the Distinct or only of the Coberent Kind; so they are generally in the next Stadium, left free from Hazard, and seldom do require more than a due Regimen; for the Fever either ceases or lessens, and the Urine either drops a Sediment, or has none at all in it: Which are Arguments of a partial or total Traslation of the mor-

bid Particles to the Skin.

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Where indeed the Fever, from the Beginning, is Continual, then they are Comatous, they are afflicted with Subfultus, and various other Symptoms. And if it retains to the Helick Kind, or the Heat be small, and the Pulse weak; we are then obliged to have recourse to Alexipharmacks of different Degrees, in proportion to the Desett of Spirits which are requisite for a Crisis; for in this Case, tis not to be expected without these Helps. Not many Years ago I had a Patient, of twelve Years of Age, who was seized with a Delirium: Her Pulse was

obscure, and her Heat scarce perceptible. On the 14th of March 17:0, the Small-Pox broke out; the had Perechia on her Neck, Arms and Breaft. her Pulse was quick and small, with little Heat: the Urine was Citrin, but without any Sediment, I ordered a Blifter to her Neck; and gave her Sp. C. C. Gtt. vi. in Sage-Tea. Also I prescrib'd a Bolus of Testaceous Powders, and Julap perlat. every fourth Hour. By the help of these, the Pustules broke out regularly (of the Flux Kind.) As Symptoms abated. Orders were left to lessen the Doses. On the 21st her Urine settled: The Pustules maturated without any Trouble to her, fave that the Saliva was a little glutinous, and less copious, and her Urine not plentiful. However, her Face was yet swell'd: I order'd her Ag. Petroselin 3 iv. Sal. Succin. 38. Syr. e. 5. Rad. 3is. Of which she was to take every second Hour two Spoonfuls: I order'd her a little Canary once a Day; and at Bed-time Syr. de Mecon. 3 ij. The 22d, she was still feverish; the falivated more plentifully; her Face was yet tumid; the Pultules, from crude and waterish, now turn white and fuller; her Urine settled, but she slept ill: I order'd the fame Medicines to be continued. The 23d, I prescrib'd as the Day before. Her Lips begin to scab. The 24th, her Salivation continued: The Urine was more plentiful, but without a Sediment: the Fever lessens: Her Face was yet swell'd, and her Eyes were inflam'd, and watry. The 25th, Her Urine fettled, and was plentiful; her Eyes grew better; and the Fever less: She falivated: Her Appetite return'd; The Remedies were the same as before. The 26th, they scab on the rupper Parts, and below also: The Salivation and Fever lessen. The 27th and 28th, the Salivation and Fever abate; Her Appetite now return'd; Scabs come on every-where. The 31st, the Scabs fell off: No Salivation remain'd: Her Utine was Citrin, - Without a Sediment: Het Appetite was good: She had no Stools from the Eruption till now: The Pulse was hardly frequent. The 10th of April we order'd ziv. of Blood to be drawn off, which was Rheumatick, and the next Day an Infusion of Senna was given, by which she recover'd. Thus the Fever, tho malignant and remiss, was manag'd without any great Pomp, through the several Stadia, to

the Advantage of the Patient.

I was call'd some Years ago to a Gentlewoman, seiz'd with the Small-Pox. She had taken some Sal. Cathart. amar. by which she was much dejected, and her Spirits were very low. Spots begun to appear, and she was very fainty; her Pulse was low and quick and her Heat small. By which 'twas easy to guess that her Spirits were much exhausted. I order'd her a Blister, and generous Alexipharmacks. Upon which her Pulse grew stronger, the Pustules broke out plentifully, her Sickness abated, and after the Eruption, a plentiful Salivation ensued: And by the Continuance of the gentle Alexipharmacks, she recovered, without much more ado. The Pustules on the Breast were large and vesicated.

It often happens that the Fever is Continual and Ardent; and the Management above-nam'd would be so far from being advantageous, that you would endanger a Train of very ill Symptoms: As I, knew it to happen in a Boy of six Years of Age, in 1698; who, upon being seized with the Variole, had Deliria and Subsultus Tendinum upon him. His Pulse was very strong and quick; and his Heat very great. Upon giving Testaceous Medicincs, and the stronger Cordials, he grew much worse: But upon changing these for Bleeding, with cooling and diluting Remedies, he grew cooler; his Pulse became less strong and softer; his Deliria abated; the Pustules appeared; and in short, he was cured by the cool Regimen, without much Pomp. This is hot

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not only a standing Truth in the Small-pox, but alfo in all Eruptive Fevers; for 'tis certain, that if the Fever be too violent, the Eruption will be an Effect of this Violence; and we shall by this Imprudence, hurry on Inflammations of the Lungs, the Head, or some noble Part, and thus hasten their Exit.

Tis remarkable, that all Eruptive and Inflammatory Fevers early require Bleedings, and other Evacuations, (if at all:) and the want of them is rarely (even in the 'Axun) recompens'd by any Sudotificks, though the Urine be concoded, and they feem to be indicated. But the Heat requifite for a Sweat colliquates the putrid Matter, reblends it with the Blood, impacts it into the Lungs, or some confiderable Viscus, and kills the Patients, when we might reasonably have expected a better Fate. Whether it is, that the more we endeavour to heat, the more we incraffate; whether the fibrous Parts of the Blood eafilier remix; whether they are more bulky than to pass the Pores; whether when the ferous Parts are evaporated, the fibrous are still retained; whether in this State the Spirits are too fcanty; whether one or more of these contribute; ris little to our Purpose, any farther than that, Evacuations are to be made very early.

I was called, in 1710, to a Gentleman of Eighteen Years of Age, who had the Variola: They broke out with a brisk Fever: They were of the Confluent Kind: He was reftless, thirsty, and very hot; he continu'd very hot all along from the Eruption to the Maturation; when the Pustules were very painful, the Fever very high and vigorous, and the Arteries beat wonderfully strong; the Intestines were so dry'd with the Heat, that we were forced to extract the Faces (when the painful Throws offer'd) with Instruments, (for a Glyster had no Effect, the Faces being too plentiful;) there were Perechia on the Legs;

Legs; the Face, Hands and Feet were fwell'd; he did not Salivate, but Breath'd Inort, and Cough'd; his Urine fettled; he was taken with a Diarrbee. from whence his Right-Hand fettled; the Diarrhea continued for four or five Times next Day, and he flept well; his Stomach pain'd him from overfeeding; his Pulse was still strong, and the Fever continu'd; his Face scabb'd; his Hands fell, from the Breach of the Vesicula, which was a Continued one: Notwithstanding the violent Cough, by which he Expectorated plentifully, with the Affiftance of Lindus's and Pettoral Decottions, his Face did not fall, but Scabs grew four times upon him: At last a Hellick seiz'd him; but by the Correx and a Cooling Diet, all Symptoms, along with the Fever, vanish'd. I treated him with Cooling and Diluting Medicines, and Opiates at Night; Pettorals ex Decott. Pettoral. & Tintt. Croc. cum Syr. Balfam. And if Sickness requir'd, (join'd with Faintings,) Te-Staceous Bolus's with Alcherm. S.M. & Julap. perlat. I was inclin'd to ha' Bled him; but a gentle Diarrbie enfuing, effectually abated the Fervor, (which before was Violent; ) after which, Affairs fucceeded well. 'Twas observable, That the Diarrhaea, Scabs and Cough were a Succedaneum for the Defect of the Salivation. I must here take notice of another Observable: "Tis the Common Opinion, That the Evacuations by Blood and Stools, either contribute to prevent these Disorders, when Epidemical; or at least, to render em more favourable, if feizd; neither of which hapned in this Youth; for he was both Blooded and Phyfick'd plentifully before, and yet I never faw any one worse Pitted than this Person was: I say not this, to discourage Persons from these Precautions, but in order to a faither Enquiry how far they may be of Use to what they are intended for. turated: Those of his Rody

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I shall now mention one of a mix'd Stamp. The first Day his Head ach'd: His Pulse was weak: He was thirsty and feverish. 2d, He had a Lumbago, a Fever; and Sand was in his Urine. 3d, his Urine was fandy: His Fever still continues: This Night some Pimples appear. 4th, His Urine was fandy and bloody: He was watchful: Petechia were on his Breast and Knee: His Fever was Continual. 5th. His Fever was fierce: His Urine was not bloody: He slept little, and had a Diarrbea. 6th, He slept little: He had a Hamorrhage, which lessen'd the 7th, The Hamorrhage was large, and he was watchful, but the Fever was Heltical, and his Pulse weak. 8th, He had a Hamorrhage: The Fever was violent, with a strong Pulse and great Heat: The Pultules were of the colour of the Skin and Seffile; in the Legs they were Petechical, small, and depress'd at top, of the confluent Kind: His Thirlt was great: He had a Diarrhaa: Now the Petechia vanish, 9th, The Fever continued the same as on the 8th; the Pustules begin to rise and inflame; his Lips and Hands swell; the Pustules are painful: He had a Diarrhæa for 3 or 4 times: He was watchful: And although he eat Cheese and drank Ale: yet at Night he slept well. 10th, His Fever continued violent, and his Urine high-colour'd, with a 11th, The Fever was yet violent, his Urine Citrin, without Sediment: His Face swelled more; he did not falivate, but expectorated: The Pultules in his Hands maturate, and those of the Abdomen inflame: He rav'd, by drinking Claret. 12th, His Face and Hands maturate: The Puftules of the Abdomen and Legs grow red at Bortom: He had a high Fever, was Thirsty: His Urine was plentiful and high-colour'd; he had a Diarrhae for 4 times: His Right Arm was much pain'd: He flept III. 13th, The Pultules of his Face and Hands maturated: Those of his Body were yet crude: A Heift I

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plentiful Flux of Urine made his Face fall! His Arm was painful: He had a High Fever: He flept ill. 14th, The Puffules in the Face scab, and maturate in the Body, but not in the Legs: He encreas'd his Fever and Asthma, and made his Urine bloody, by drinking strong Liquors; besides, he had 7 or 8 Stools. 15th, The Fever was high: The Scabs of the Face fall off: Those of the Hands and Body are fully ripen'd; those of the Legs were half ripe: His Urine was plentful. Ctrin: He was Afthmatick, tho' he flept pretty well. 16th, The Fever vanish'd: The Urine was somewhat bloody; but by the Liberty which was taken of Drinking, from this to the 24th, his Afibma, Delirium, Cough, and Weakness encreas'd, and he died a Week after. It had been possible for this Gentleman to have escap'd Death from the Small-pox, if he had been regular; which yet wou'd ha' been surprizing, considering he was then under the Operation for an Empyema: And moreover, the Fever was fomewhat remarkable for first, 'twas a cool Malignant; then Ardent; and lastly Hellical: which oblig'd us to shift, from the Volatile to Testaceous; and from thence, to the cooling and diluting Medicines, according to the different Degrees of the Fever.

There are a Couple of Gentlemen who have af ferted, that Methods may be made use of to hinder Epuptions, whether in the Pestis or in the Variole: Their Sentiments are new; and I wish we may be affur'd of the Truth of them, by repeated Trials because we need not then wait for the hazardous Events happening from the Retreats of these Eruptions. Our Country man Sydenbam mentions a Perfon who dy'd of a Perechical Fever, and whose Eruptions and Death he blamed for the Want of another Bleeding: And Boerhaave de Variolis fays, Quamvis enim in boc Morbo raro Cogiterur de bac Indicatione, (viz. ut Stimulo Inflammatorio ablato-

foncture.

fanetur Status presens & impediatur ulterior ejus Progressus &, proinde Caveatur futura Suppuratio, Ganerana, &c.) & de hac Methodo imprimis (-que deprebensa est in omni Instammatorio valere ne Instammatio in Pus Gangranamve abeat : quum in aliis omnibus succedat, hic nibil repugnet, Morbus variolosus Cape fine Variolis fit + Confiftet illa-in his I. Mittatur Cruor (ad Citam largam progradu Mali moderandam out repetendam Missione Sanguinis ut Moles Crash minuatur & diluentibus Spatium Concedatur; iterumque; Cita, larga, - Missio Sanguinis instituenda debet Continuari in Remissionem satis notabilem Doloris vel ad prima signa Deliquij Animi: debet repeti ex Consideratione redeuntium Symptomatum ad que tollenda prima instituta fuit; Crusta absens Finem definit ) CASUS TAMEN. IG-NARO MORBI MEDICO, SEPE DEDIT SUCCES-SUS PROBANTES TALEM ARTEM.

These are his own Words, gathered out of his various References; and this Accident (of Misapprehension I mean) I am told, has encourag'd him to follow this Practice since: How it succeeds, Time will make it out, but I believe there are certain Cases where this is utterly impracticable; for where the Persons are seiz'd with the Voriolæ or Pestis of the Hedical Sort, and under the Desect of Spirits; the more Blood they take away, the more Spirits they draw off, and there would be too sew lest to keep the Circulation on soot. Besides, I have seen some such Trials succeed so ill, that I doubt, in this Kind, the Project will not hold Water, whatever it may do in the Ardent Sort.

In the second Stadium of Exuptive Fevers. There is the same Variety of States of the Fever: Where the Exuption is complete and there is an 'Axueria': 'Tis then Folly to pretend any farther Business, but we ought to leave the Affair in this Condition; for we may, by tampering, remand the peccant Matter

Matter into the Mass, which may give room for it to play a more tragical Game than before. I need not point out to you, that the distant Interval of the Pulse and calm Temper, will convince us of

the Fever's having left the Patient. The morning

It may, Secondly, happen, that an Intermitting Fever may be join'd, in this Stadium, to these Eruptions; and then great Care must be taken that these Intervals be not, by any busy Method, advanc'd into a Continent, much less into a Continual Fever. We ought here to be Spectators, and must only order a due Regimen as the Species of the Hever requires: For, In this Case, Nature of herself will conquer all Difficulties. We must bere again (as I have hinted above) be careful not to give the Cortex, till the Eruption is complete; and then, it is fafe enough to extinguish the febrile Ferment, and to hinder it from creating fresh Symproms; though 'tis more useful in other Fevens, than the Small-Pox: For tis, first, an ungrateful Remedy. and then, if an Intermission, or even a Remission of the Fever comes on, a due Regimen is only requir'd. and generally fuffices.

Remitting Fever: And here the Cortex is useful, as in the Intermitting, after the Complete Eruption; and by so much the more, because this being only a halv'd Interval, there is more Occasion to obviate the greater Danger that may happen from Mismanagement, which may turn it too soon into a Continual. Besides, 'tis necessary to remark, whether the Fits retain to the Ardent of Hedical Species, in order to the Knowledge of the Medicines of Regimen, which may be proper in these Species: And Notice, moreover, must be taken, that the nigher we draw to an 'Axaa in all Fevers, we must make the less free with any Evacuation, (unless Indicated by plain and almost demonstrable Signs.)

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Fourthly, When the Crisis is extremely Impersett. and that more Matter yet lodges in the Mass, (besides what is push'd to the Skin), so that the Fever proves Continual, as it always happens in Flux-Eruptions: Then the Case is so much the more deplorable, as the Strengths of the Patients are difproportionate to the Symptoms. Here, too, the the Fever may be either Ardent or Hedical; and you must, both in the Regimen and Med'cines, alter as they require: For otherwife, if you should Bleed and Cool in the Hellick, or give warm Alexipharmacks, and Blister in the Ardent, the Consequence would be the Augmentation of those very Faults we would amend. And, by the latter unfeafonably given, you would, by adding more Fuel to the Flame, bring on all the Symptoms that are Companions to an Over-rarefaction of the Mass; such are Bloody Urine, Phrenzies, Coma's, Resorption of the Pus, an entire Suppression of the Salivation, and various other fatal Symptoms; for these, and many more may proceed from an Encrease of this Moment of the Blood, which will produce all these, as if the absolute Quantity were really Encreas'd; for the Vessels will, in each Section, contain a larger Moles. And befides, 'tis known by Experience, that Regular Separations are not the Effects of Fluids Irregularly mov'd: That Irregularity depends either on too Rapid or too Slow a Motion of our Blood. So that on either hand! we have it in our Power to Augment or Lessen the Motion; by which we may expect a Regular E ruption, &c. if we proceed as prudent Men; but the Reverse, if Ignorance governs us.

I shall take leave to digress a little about the Patrons of the Cool and Warm Regimen and Methods. I shall only mention two of our own Nation, who have seem'd to savour the one or the other: And indeed, if we examine their Practice

throughly,

throughly, we shall find that, in the main, the Difterence was but a feeming one. Tis true, we find Sydenham uses Alexipharmacks more warily; and Morton seldomer approves of Bleeding. Sydenham would not give Alexipharmacks without an apparent Necessity; nor would Morton Bleed and give Coolers without an evident Reason: And yet, when Occasion requir'd, we find them to have changed their Methods, but with too much Regard to thair darling Hypotheses. The one had fix'd an Inflammation in the Blood for the Cause, and the other a Venenum: And the one, upon all Occasions, inculcates the Effranationem Ebullitionis immanis, whilst the other presses the Use of Alexipharmacks, for the Expulsion of the Venenum. I shall not here take upon me to determine how far these Authors Works may have influenc'd young Practitioners to follow their Steps; this is but too much known in our Isle, where many have fallen Victims to both these Hypotheses, as each Tyro of Physick's Fancy led him. But I shall now shew you, that they themselves chang'd their own Methods, as their Reason guided them; which is enough for us also to make Use of our Senses and Reason, as they did. We find Dr. Sydenham allow'd a little Sack, and in his later Experience, even of Blisters; because, fays he, - Adeo ut in omnibus ferè quos tractavi Variolis · laborantes, observaverim Pulsum IN CARPO SALIENTEM ÆGRE PERCIPI POSSE HOC TEMPORE, (that is, at the Eleventh Day.) And Morton, in his Hiftor. 55. would have Bled one in the Progress; for, says he, FEBRIS autem cum Delirio conjuntta jam evidenter recrudescebat Cute universa Humore & Rubore Erysepelatode suffusa, atque miliari Eruptione ubique in Interstitiis Exanthematum efflorescente, unde non obstante forti Ar-TERIARUM VIBRATIONE per totum Morbi Cur-Sum fatale Prognosticon Protuli, PRESERTIM to thew gol) noticed as Killerines video (loviate

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PRÆTER MOREM FORTI ET ROBUSTO V. SECTIONIS JAM (the 11th Day) CELEBRANDÆ VENIAM A PARENTE IMPETRARE. The One then Bled, because of the Strength of the Pulse, and over-bearing Vehemency of the Fever; and Sydenbam gave Alexipharmacks, and Blister'd, for the Weakness of the Pulse and the Lowness of It.

I come to the Third Stadium; where Suppuration is fometimes the Business of the Physician. Here, too, the Fever is the Compass we must steer by; which now is either quite Vanish'd, Intermits, Remits, or is Continual: And the Kinds also differ here, as in the other Stadia. But, as enough is faid on these Cases above, 'tis needless to annex the Management; only we must remember to begin from the weaker Medicines, and afcend gradually to stronger; for in such Cases we must not dwell upon a Method which does not prove fuccefsful: So where, in the Small-Pox, the Putrid and Secundary Fever is violent, with a strong Pulse, great Heat, Anxieties, or Phrenzies; the gentler Coolers and Opiates are too weak, without Bleeding: Nay, in fuch a Case, I find that Opiates, unaccompany'd with the Bleeding, do flupify the Patients wonderfully, without any Advantage gain'd at all by them. Indeed, Evacuations are not now to be attempted without an extreme Caution and Confideration; but, however are not to be neglected, when there is an Indication, and quod Cito fit, bis fit. Where Nature has fo far conquer'd the noxious Matter, as throughly to have exterminated it from the Mass, our Business is at an end, and a prevention of its Return by an ill Regimen (and all Symptoms thence arifing, when reblended with it) is our Task. Thus, in the Small-Pox, by preventing Symtoms that disturb this Order of Nature, by either quelling the exorbitant Commotion (by which the Puffules are reforb'd,) or by animating its Motion (for want of which

which, they turn fessile and depress'd, and either imposthumate not at all, or very little; hence Delirium's, Subfultus, and all ill symptoms; ) you may place your Patient in a fafe Way, who before feem'd at the Jaws of Death. If the Fault be local. as it fometimes happens, it is not amended with-

out a local Application.

It may here deserve a Question, why Topics have never been made use of to the Face, in order to promote Suppuration; for if the Face continues to iwell much, and if the Salivation keeps on foot, Affairs go well: And if the Reverse happens, 'tis a dangerous Cafe. We find that the Face cannot keep up to this Pitch, if Evacuations drain the Matter through other Ports, or there be any Mismanagement in Diet or Medicine, or any other Symptom revulses the Humour. In short, the Danger of its Retreat is never over 'till the numerous little Inflammations are fully suppurated; that is, 'till all the Blood, (pure and impure,) impacted into the little Cuticular Fibres, and engag'd in fuch certain Rows of them, turns into Matter, and difembogues into fo many Common-shores; and thus leaves the Blood free to circulate calmly on, without any Impediment to Motion, or leaving any extraneous Matter in it to create any farther Fever. 'Till this, I fay, happens, we are obliged to fleer with great Caution: for Reforption of any Parcel of this stagnating Matter too often produces Symptoms irremediable, though under the best Hands. Circumstances being put in this Light, 'tis amazing to find that Phylicians never have attempted Topics to haften a Suppuration in the Face, from whence fo many unforeseen Accidents hurry us headlong into the Grave; for where the Design is Suppuration of. many Ahlegmons, and the Fever is a Symptom of the Pain lattending the Tubercula, it is natural to believe, that what we would apply to one large Phleg-K 2

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Phlegmon to ease and suppurate it, would hardly fail to have the same Effect upon many. And in Effect, it has been found, that Discutients, &c. applied in this Case, have not fail'd of their Effects, as is evident in Diemerbroecke, Hist. 13. De Variolis & Morbill. where he relates, That one Mrs. Cowper, by the belp of Cinnamon-Water rubb'd on the Face, prevented any Eruption there. Hence are Epithems of Saffron, Rose water, Women's Milk, and fuch-like, applied to the Eyes: Hence we use Aftringent Gargles for washing the Mouth and Throat: Hence Saffron-Stays are dipp'd in Women's Milk, and applied outwardly to the Throat. We then are of Opinion, that the Restringent Faculty of the one, can hinder the Eruption of them in these Parts; and that the Discussive Force of the others can disperse the Matter of the Pustules. In short, it is reasonable to believe, that as we suppurate a Bubo in the Pestis with good Success; nay, and we look upon it as good Practice, to hasten the Suppuration of it; So I cannot see but, by a Parity of Reason, we might also safely suppurate the Pultules of the Variola: For whatever Symptoms happen from the Retroceffion of a Bubo, may also happen in the Small-Pox, from the Pustules returning, or turning Seffile. Now, if these are posfible; Why may not Suppuration be promoted there also? And there may be this Comfort in the Trial; that I fee no Inconvenience can attend it, but much Good.

Another Quare is, Whether it be good to cut the Blushes e're they scab? I shall mention some Authorities, and give in my own Sentiments. Riverius, Diemerbroecke, and some others, say, That Experience has taught, that when they are cut, they are longer in curing, and make worse Escarr's; and therefore they believe it better to leave it to Nature. Mayerne advises cutting them when they

are full, deterges them, and so lets them scab and dry. Langius says, Where they are watry, undigested, livid, and from the Air, he would open them; for then the Matter is very corrofive and exulcerates the Part, and so makes a deep Pit; but where they are thick, white, digested, and concolled, he says, there is no occasion. The Practice at prefent is in Disuse. And so far I can say by Experience, That if the Cuticle be separated, and a Scab comes upon it, the Cicatrix is very ugly; and the oftner they happen to scab, and fall off, the more they are mark'd; as was very evident to me in 1710, when the Small-Pox were epidemical, and very fatal, one of my Patients, as above-nam'd, had them repullulate four times, and the Cicatrices were the Ugliest I ever faw. And in the Main, I fee little Advantage to be gain'd, unless we can hinder the ulcerated Parts beneath to ouze, which is dangerous; and therefore 'tis, at least, not to be done, till a complete Maturation, and then the most of the Damage is over.

Having run through the various Stadia of these Fevers, I come now to the last, (viz. the Declension or Desquammation.) In most other Eruptives, this is the third; but in the Small-Pox 'tis the fourth. If there are no Remains of a Fever, the Patients are in Safety; or if the Fever intermits, remits, or a Hellick comes on, cooling Decollions and the Cortex will re-instate them; as I lately experienc'd in a Child of three Years of Age, whose Sister died comatous and feverish. She, I perceive, was held, as the Child I am going to mention: But the Patient, by a preposterous Method of Catharticks repeated, (and some other Mistakes,) miscarried. And from hence I was called to this Child. The Scabs were quite vanish'd: She had a Cough upon her, also an Anorexy, and a Hellick Fever. I order'd Blood to be taken away: I gave ziij Cort. peruv.

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peruv. opt. Jubt. pulv. to ten Grains at a time, and order'd her to drink after it a Mixture of Aq. Lad. alex. Iviij. Syr. Balfamic. I B. From this time forward she was relieved, and in five Days her Pulse grew calm. She had no Heat: Her Spit was concocted: She regain'd her Appetite: Her Urine from intensely Red, became Citrin: And in twelve Days she was perfectly recover d, and grew plump. If the Fever is still Continual, they are in imminent Danger, and do generally go off anhelous and delirious.

They who labour under the Morbillose or Scarlatine Fever; undergo the Stadia I have now nam'd, (save Maturation,) and they are afflicted with all the Kinds of Fevers before the Eruption; at the Efflorescence; and after it is over; as I have experienc'd. And therefore all the Methods above-

named must be used, as Occasion ferves.

I was called to a Gentleman, who, after a sharp Fever, was afflicted with a Diarrhae and Vomiting [Cholera.] His Scarlet appear'd, but presently retreated; and his Throat fwell'd: He died in a High Fever in four Days. Doubtless, if he had been blooded, they would have broke out regularly, and his Life might have been faved. I was called, four Years ago to a Girl who, at the Time of the Eruption, had a violent Fever on her; she was kept in a hot Room in Bed, and her Regimen was warm; whence she was restless and warchful, and under the Danger of Deliria: But by a cool Regimen she immediately grew better: The Scarlet appear'd regularly. She refted, and soon recover'd. Morton very well observes the succeeding Symptoms to be either Colliquative, and to require Opiates; or Inflammatory, and to require Bleeding: Both which I have found true. And I lately found the Colick (in a Boy, after the Measles) to be taken off by BleedBleeding and Milk-water; because of a fix'd Pain,

and his being very feverish.

Here I shall crave Leave for a small Digression on the Pustular Fever in 1710, which was epidenrical and very fatal. They begun with Algors, but not remarkable; which are certain and faithful Fore-runners, and are the Date of any Fever. Next to this, some were seiz'd with Headachs, others with a Lumbago, and many with a Vertigo only. But the Temper in most was so mild, that unless the Pulse was narrowly felt, you would have been deceiv'd into a Belief that they were only Hypochondriacal: The Pulse was myurus, very frequent, and beyond a hundred Stroaks in a Minute, although the mild Temper and Sighings put on the Shape of Hypochondriacism; so seldom did they, at the Beginning, complain of any violent Symptoms: For their Spirits were stole off quietly; and 'twas obferv'd that they died without any Struggle, and then no Pustules appear'd. The stubborn Watchfulness brought on, the 4th or 5th Day, either a Coma or a Phrenzy, according to the Constitution of the Decumbent, which did not yield to Remedies. The Urine, at the Beginning deposited a Sediment pretty laudable, and the Decumbents fell into spontaneous Sweats, and Pustules broke out; and thus, for a while, Affairs feem'd to prosper tolerably well. But if any Medicines were given, by fuch as were call d in, the Urine immediately became confus'd, and the Patients turn'd Comatous or Phrenetick. In other Constitutions, it was observable, that if Sweats came on, the Urine remain'd concocled, Pultules broke out, Symptoms abated upon their Continuance, and they presently recover'd; nay, at the first Appearance of it, this was farther remarkable, that fuch Phyficians as thought they had found a certain Method to relieve them, and that by Sudorificks, did at last find their Mi-**Stakes** 

in most others, not without Confusion: They either died or recover'd in eight Days. This was certain. that a Merchant did at this Time, contrary to an Order (then in Force, for Ships observing a Quarantain, it from the Baltick) unload a Vessel from Sweden with Flax, &c. and that a certain Occasion oblig'd most of the Inhabitants, out of Necessity or Curiofity, to be very near the Place of Unloading: Immediately upon which, this Fever became to common, that every House had almost its share; and this Merchant who committed this Misdemeanour, fuffer'd, and fell by it himfelf. But a Frosty Seafon succeeding, it became less frequent; and, at last, by a strong Frost, it quite vanish'd. I shall Subjoin some Remarks on it, and then shall proceed.

First. If the Patients had a sharp and Pungent Heat on them, along with a strong Pulse, and their Urine was turbid, confus'd and milky, although they had Sweats on 'em, these were fymptomatical; and the Eruptions thrust out under these Circumstances, were not fuch as diminished, but added to the Symptoms. But where the Urine continued concocted, or Concoction had preceded, and it turn'd clear or firamineous, and where the Pulse and Heat were not too strong; these Sweats and Exuptions were critical, and the Fever vanished, or turn'd Remittent, and fo, in a fmall time, was breathed off.

Secondly, Where the Pulse was weak, and the Heat imperceptible, or near the Natural; then the Eruptions did not fucceed, nor could the Blood be clear'd of them; and then the Case was despe-

rate.

Thirdly, That no Evacuations (not even a Gliffer) fucceeded well atthe Time of the Eruption, if the Pulse was weak and low; but that they either (in Proportion to the Evacuation, caused the Papilla to disappear, or turn sessile and discolour'd; and then begun a-fresh all the ill Symptoms, till the Blood was again (which was very hard to do) enabled to part with them.

Fourthly, That Trouble of Mind, or Concern, caus'd these Fevers to turn up to the Head, and either made them turn Phrenetick or Comatous in

a short time.

Fiftbly, Where there was a large Quantity of Spirits (as was easily guess'd, by the Strength of the Patient, and a large Pulse) small Mistakes did little Harm; but where there was a Penury, any

Error destroy'd them irrecoverably.

Sixtbly, That after the Declension of the Spots, if the Urine was concocled; gentle Diarrha's did Service, and, by degrees, they recovered: Nay, if we were forc'd, by Lenients, and if it was upon a concocled Urine after the State, and the Fever was long in going off, they succeeded well.

Seventhly, Coughs were a good Sign, if the Eruption had vanish'd, and the Urine was concocled; then the Expectoration carry'd off the Fever, and

prevented other Accidents.

Eighthly, If the Urine fettled, and the Pulse grew strong after the Sweats, and more soft, it be-

token'd well.

Nintbly, The Cortex avail'd little before the Eruption, as is usual in other Eruptives, but kept them in a neutral State, and they suffered long for it; but after the Eruption, it succeeded well enough.

Tentbly, That though Sweats succeeded in some who did follow this Method, from Nature's Instigation, I mean, when there was a previous Costion, or a Serous Blood; yet it was found not to succeed, unless they continu'd them uninterruptedly, and gave them the gentler Alexipharmacks, such as Testaceous Powders, Julap Perlatum, and such mild Medicines.

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Medicines, as only supported the Spirits, without heating the Sick; for if you gave them to such a Degree as any-ways heated, the Sweats stopt, and

they dy'd.

Eleventhly, All Evacuations were to be made use of from the very Beginning; or they seldom, if at all, succeeded: But if you made use of Bleeding, Sweats, Emeticks, or Lenients from the Beginning, Affairs succeeded well enough; only if Lenients were given after Bleeding, the Sediment in the Urine was plentifully thrown off, and the Fever, in some, was check'd in the Bud. As to Diaphoreticks, it is to be own'd, they succeeded, in some, at the first, who were inclinable to Sweats, without the Danger of over-heating; and in the older People, and in such whose Blood was not too Viscid, but rather Serous and Phlegmatick: However, the Method of Bleeding, and Lenients, with gentle Pearl Juleps, afterwards completed the Cure most safely.

Having said enough of this Matter, I shall, under the next Chapter, recite an Observation or two, to

illustrate this Affair.

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### Of Crifes.

A Crisis is a sudden Change, to better or worse, in Fevers, from Kejvo to judge; because by this Change we pass Judgment. When the Blood contains any Heterogeneous Matter, and a Struggle is rais'd in it to throw off this Load, it is judg'd to be ready to part with these Particles, when the Urine drops a Sediment, and the State is at hand; and thus the Crisis commences when the Blood

Blood calmly fecerns its noxious Particles: But whether Nature will do it by its Pores, Inteffines, Liver, Lungs Uterus, Stomach, Nose, or Annes, &c. is not always eafily determinable; for Swears, Diarrbæa's, Coughs, Jaundices, &c. and even Abscesses. equally terminate Fevers; for it is not the Figure but the Patency of the Emiliaries, that determines the Paths of the Secretions in different Perfons; fo that whoever has by Nature the Pores of the Inteflines more patent and more yielding than those elsewhere, will throw out these Morbid Particles by them. That it is not the Figure that paffes these Particles, has been made evident, by shewing that all the Arteries in every Section of them, are circular; and by demonstrating that Glands are but Complications of these Arteries.

In Crifes there are Three Cases.

First, Where the Urine is grofs, thick, turbid, milky and confus'd, or where Sufpensions follow a laudable Sediment, tis call'd the segu avallapatut vov. This is an Argument that the Morbid Particles lie buried in the Sinus of the Blood, and are fo intimately blended with it, that Nature is in danger of being furmounted, and that the Crifis is not yet begun; or if begun, has gone backward: And therefore, that all Evacuations, Eruptions, or whatever Attempts Nature makes under these Circumstances, are Symptomatical; and by furthering any of these, 'tis odds, but that you destroy your Patient: Which is confirm'd by Sennertus, faying, De Febre Petechiali, ubi Codio in Urina Petechia expellenda, alias non. I am not ignorant, however, of what Forestus says, that Crisis agnostica plerumq; fanat. L. 2. Obf. 26. By which, he means nothing farther, than that if any gentle, moderate Evacuation, which does not weaken the Sick, happens. fuch as a gentle Diarrhaa in the Small-Pox, which does not hinder the Pultules to break forth, nor produce

produce any dangerous Symptom; fuch are Sweats before a Crisis in a Fever, which neither disturb the Head, nor introduce any other Accident, because they are gentle; then these may be overlook'd: But if fuch continues, and becomes confiderable, inafmuch as the Strengths of the Patient decay under it; then it is necessary, according to the urgent Symptoms, either to quell the Commotion, by Bleeding, Dilution, and fuch-like, (only having Regard to the Fever's being near the axun;) or, if the Motion be too languid, to support the Spirits with Alexipbarmacks; or Blifters must be apply'd, 'till a better Chance happens. Sometimes, here, the Cortex is of Use, if there be Remissions, and you suspect the Nature of the Fever, (but not in Eruptive ones.) This is call'd, The State of Confusion.

I shall subjoin an Observation or two, to confirm these Sentiments, and shall proceed to the other

two Cafes.

combo to

Anno 1710, I was call'd to a Gentleman, who finding himself disorder'd, was twice Blooded: Some time after, he took his Bed; and when I came, I found him treated with Testaceous Powders, Cinnabar, and Cordial Juleps, stock'd with Malt Spirits, which are strongly Empyreumatical; he Iweat plentifully, and Red Pustules appear'd copious on his Breaft; his Heat was sharp, his Pulse weak, and his Urine was milky and turbid; hence I boldly pronounc'd, that these were not Critical: Next Day his Urine was Crude, as before; and notwithstanding that we withdrew all strong Cordials, he yet sweated abundantly; and after this, came on a Fetid Diarrhaa yery plentifully; his Pulse was larger; he unexpectedly went off Lethargick; after his Death, Bloody Stools were thrust out, which doubtless had been occasion'd by the Belgen : a lite fall les to prezh i ria mer

#### A Critical Essay on Fevers. 141

neglect of Bleedings, and by the Administration of the hot Cardiac's.

The fame Year also a Gentlewoman consulted me; the was afflicted with a great Head-ach, and was Plethorick; her Heat was moderate, and Pulfe not fliong; hence I only took off 3v of Blood, which reliev'd her Pain; I advis'd her to go to Bed; the fell into univerfal Sweats, and her Urine was concocted; while the Sweat, her Tongue continu'd moift, and she grew better, and her Pulse ftronger, and more undose; but whenever she suppress'd the Sweats, as she often did, her Urine turn'd muddy, and she was troubled with Vomitings; hence, upon taking a little Aq. Pulli, she vomited freely three or four times, by which however her Spirits were exhausted; but, by some Bolus's of Pulv. e Chel. c. Bezoar. Lap. de Goa & Alcherm. every fourth Hour, with a little of her Julap. perlat. her Sickness abated; her Urine from lacteal and confus'd, fettled with a laudable Sediment, and her critical Sweats return'd; but being again weary'd with these constant Sweats, by rising out of Bed and cooling herfelf, her Urine a fecond time became muddy, and now had only Suspensions in it; her Tongue grew dry and black; she became fick and fainty, and her Pulse intermitted. Upon renewing the Bolus's with Serp. Virg. to some few Grains, and applying a Blifter to her Neck, the Papilla appear'd next Morning. I would from the Weakness of the Pulse, the moderate Temper, and comatous Disposition) have apply'd more Blisters, which were only consented to, twelve Hours after, by the Affiftant, who then faw the Preffing Danger of omitting them longer; but neither Thefe, nor Volatile Salts, added to the Bolus's could awake her, for she dy'd Comatous next Morning. and delice with multipage oils are police of a few min

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2dly. Where the Urine is concolled and drops a laudable Sediment, or has a Nubes in it that lasts for many Days, which unites more and more, and at last fettles to the Bortom. This fairly denotes a Separation: and fuch as Riverius adventures to pronounce well of, even in Pestilential Cases. The Sediment in the Urine to be laudable, Bellini p. 14. de Urin. says, Sedimentum debet effe figura retusa Pyramidis vel portionis Spharoidis cum Basi in Fundo Vafis. I shall add, that it ought to be equal, not farinaceous, xeruncions, nor like Sperma Ranarum; for these are either Tokens of Crudity or Overcostion: But it ought to be chylous, instar Geniture vesicalis, and lie and look like White Clouds. When the Urine has been thus a Statu, and Sweats or any other Evacuations supervene, they are critical, and are to be encouraged, whether the Sediment continues or not: Nay 'tis better that it should vanish, because 'tis a Sign of an entire Victory; and, I doubt not, but our Febris Anglica Sudatoria had a Concoction previous to its Sweats.

However, I have too often found the Urine to fettle well and laudably, and yet the Patients have labour'd under some troublesome Symptoms; which feems to be a fufficient Reason to conclude, that tho' the morbid Miasma do part from the Blood; yet, that there is no great plenty of this Matter still resting within, and that the Separation is only partial, and not easy to be expell'd, but by a nice Management, and that the Crifis which follows is imperfest. This is the Case in the Flux-Pox, where during all the Stadia (even of the Maturation and Salavation) the Urine often fettles. If indeed Affairs succeed without this Concomitant Sediment (Supposing it to have preceded,) his a better Sign than if it wet deposites one; because it argues the Matter less copious in the one, than the other. But if, notwithstanding the Salivation, (which in all

Fevers

Fevers is a Critical Evacuation,) the Urine fettles; there must be a great Plenty of Matter in the Blood; and if the Strengths of the Patient fail not, it argues there is Matter enough for Supplying the Eruptions, as also for any gentle Evacuations artempted by Nature over-and-above: So that in a Miliary Fever, the gentle Diarrhae is useful. Hence. in the Small-Pox, the Salivation, Flux of Urine, and fometimes the Diarrhaa, when gentle, are of use, as is the Spitting Cough, or even the Scabs falling off, and repullulating in the same Disease. Hence it appears why Riverius, in his Febre Peftilent. Monspeliens. blooded his Patients, tho' they had the Parotides Critica; for altho' the Evacuation was critical, yet it was not sufficient to evacuate the whole Matter of the Fever; fince notwithstanding this Eruption, all who did not Bleed, loft their Lives. I then affent to him, when he fays, Non erat capax totam Materiam morbificam excipiendi. Hence it appears why Sydenban, in Febris Variolofa, tho' the Urine was concolled, and Sweats came on, took Blood from his Patients : They being only a Partial Crifes, (if any at all, which is another Question:) Hence Bleeding in his Putrid Fever in the Small-Pox, was useful, the Matter being only imperfedly exterminated. 'Tis therefore necessary, where the Urine is concolled, and yet Symptoms abate not, upon some Evacuation that is critical, because insufficient; to proceed to some farther Evacuations, which may probably have the defir'd Effect, of either disposing the Blood to separate more effectually, or make it to do fo, if the Strengths of the Patient will allow: For otherwise tis a difinal Case, and hard to manage the Balance level; fince over-doing either in the warm or cool Regimen, is equally fatal. Indeed, in eruptive Fevers where the Crifis is not very distant from the Beginning, we may make free with proper Evacuations. 1912919

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ations, if Indicated; but in other Cases, where the 'Axun' is at a greater distance from the Apparatus. we must, at that Season use Evacuations very warily: However, if Nature be flow in ejecting her Enemy, or the Burden be great, or the do's it but partially; we must then try the most gentle and probable Evacuations, to supply this Defect; and they are fafeliest attended with gentle Catharticks, or rather Lenients, as I have experienc'd in several, even in a critical Parotis, but partial; for such carry off the Load per Epicrasin, and gradually, even in Pestilential Cases. If what Sandorius advances, held in our Clime, it would be more probable, by a Four-fold Proportion, according to Dr. Pitcairne, that Diaphoreticks, given upon a digested Urine, would carry off the offending Matter, than Lenients: But this being found by Counter-Experience to be false, as Dr. Floyer has affur'd us; for that we lose only, in the Space of one Day, 6 or 8 Ounces of Perspirabile, in the room of 30 or 40, or 50 Ounces lost in Italy: And it is probable that, in our Climate, we perspire as much as the same Surface (equal to that of our Bodies) loses in Exhalations on the Sea; for then 17 or 18 Feet Sq evaporating 7 or 8 Ounces of Vapours, our Body of equal Surface loses no more. And if we add half an Ounce (quam proxime) lost from the Surface of our Bronchia (which, to compute, I found out a peculiar Method,) the Exhalation of Vapours from the Sea, and the Perspirabile from our Pores, will, in all Climates, bear a near Proportion: So that in England we shall lose 8 Ounces, whereas in Italy they lofe 50. Now as the above-mention'd Gentleman concluded it better to give Diaphoreticks than Lenients in a Fourfold Proportion; I may, vice verfa, conclude from Reason, back'd with Experience, that Lenients are, upon all Accounts, fafer in our Isle, than Diaphoreticks; because there is a greater enoite

greater Patency of the Mouths of the Intestinal Glands, than of those of the Cutis, (whether the Mucus in the Intestines relaxes the Mouths of the Glands; or whether also the Surface of Them be nearly Equal to that of the Cutis; or, whether the Motion of our Blood, in these Climes is more Slow, and confequently is determin'd more towards the Intestines than the Cutis; or, lastly, whether any one or more of these Reasons concur, I shall not determine:) And hence more can (tho' only upon Concoction just begun) be evacuated; and less Disturbance and Commotion is rais'd than by Diaphoreticks; which can only be fafely given after the State: And they are moreover so often contra-indicated, that they are dangerous, because they often raise Phrenzies, by forcing the Blood too impetuously into the cortical and callous Substance of the Brain, from whence there is frequently no posfibility of remanding it. I shall add, that Sir Fohn Floyer has elsewhere observ'd, that the Perspiration, in Italy, is found to be to ours as 6 to 3; and even in this Case, the Disproportion is in a double Ratio, and it would be doubly more probable, that Fevers would be carried off by the Pores There than Here; the contrary of which is true by the whole Proportion inverted in our Clime: And even thus it becomes at least doubly more probable, that Fevers may rather be carried off by Stools with us, than by the Pores.

adly, If the Patient be seiz'd with a Fever, and his Urine comes to a Concostion, and immediately from a true and concosted Sediment, it either turns pake or citrin, without any Hypostasis, we must wait a while: for if Symptoms abate, and the Fever ceases and diminishes upon it, 'tis an Argument of a salubrious Translation: Examples of which I have often seen, particularly in the Fever of 1710, where the Urine turn'd pale, and the Pustules broke out,

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and left the Patients free from the Fever, and all its Symptoms. But if the Reverse happens, that is, if the Fever continues, and Symptoms become formidable, this is a fatal Translation; and, under it, the Spirits will fink, for 'tis of the last ill Confequence: Here all convenient Helps and Remedies must be timely made use of, as has enough been hinted at in the foregoing Chapters 'Tis to this Head is referr'd that of Hippocrates, Quibus pellucida & alba sunt Urina, mala: maxime verb tales in Phreneticis apparent. L. Epid. 6. S. 4. A. 72.

Hence I conclude, that a concolled Urine needs not always concomitate a critical Evacuation or Eruption; and, in effect, we find it does not; but that however it ought always to precede one: And hence I infer, that Rhodius, C. 1. Obs. 28. was mistaken, when he tells us of a Petechial Fever, taken off by a Sweat, tho the Urine was crude, in the Person of Angela, Daughter of Garoderina, non pragressis Notis Coctionis. And Hippoc. L. 1. Epidem. Com. 3. Ægrot. 7. Also L. 3. Epidem. Com. 1. Text. 1, 4, & Jeq. Agrot. 3. And Epidem. Com. 3. Agrot. 3. makes mention of some Observations which have Relation to this Head: But whoever confiders, that in the First Observation, there was a previous Coction, such as laborious People have, and is fufficient for 'em, as is shewed above; In the Second, before the Delirium Criticum, (as forme term it) mention is made of the Urine. And in the Third, he says, Urina tenues ad judicationem erant, which followed a Suspension; will find it usual either to have a Sediment to continue, or, which is very common, to appear crude at the Instant, or some Time before the Eruption, which entirely takes off the Disease; and this Date is too late to observe what preceded: Besides, most hitherto have believ'd, that where the Matter was entirely deposited on the Organs or Parts, the Urine was

was then deceitful: This is evident in Pleurifies. where, before the viscid Matter is impacted on the Pleura, the Urine has a laudable Sediment in it ! but when 'tis fix'd on the Membrane, none at all Nay, sometimes, in Fever-fits, with a Pleutitick Pain, it is, by all, observ'd to be stramineous during this Pain. Morton fays, Urina etenim, ut in . Spasmis vehementoribus solet, erat clara ac tenuis; for if the Urine settles at this time, the Case is very hazardous; because 'tis a Demonstration of too great Plenty of that Matter in the Blood. In Elephantiases, if they retreat into the Mass, as I have observed them to do, upon tampering; they create Asthma's, Colicks, and many other Symptoms; but when, by a regular Method, these again begin to appear on the Skin, the Urine first shews us they are about to do so, by dropping a Sediment; and when this is done, it then ceases to fubfide: For the Blood having parted with its morbid Contents into the Skin, it is freed of them, and fo is the Urine. And this is a constant and regolar Proceedure in Nature, as far as I have had Leifure to observe year side nor sold with his from

I am apt to believe, that the very Peftis itself seldom begins without a previous Concoction in the Urine. And in effect, Willichius in Probation. Urinar. p. m. 300. tells us, that he discover'd the Peffio to be approaching from the segu xejuvão es however, in this Matter, most Authors have been fo filent, as to take no Notice of it. Although they would not have the Eruptions expell'd, unless Nature had shewed the Way by a previous Coction. which doubtless must be early here; because the the Bubo's generally appear the 4th Day; but at the Time of the Eruption the Urine do'nt always settle. Hence Hippocrates. Aph., 69. 5. 4. says, Quibus Urina Crassa, grumosa, pauca, non sine Festire, Copid ex bis Succedens tenuis juvat. Tales

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autem maxime prodeunt, quibus ab Initio aut brevi Subsidentiam Continent. For it fignifies a total and Calutary Translation. And this is, as I have hinted above, when the Crisis is not very distant from the Beginning; and 'tis a regular Proceedure of Nature. Point the less by all soldings to be divining the

# CHAP. VI.

Of the Symptoms. Elephantioles it they rever used the Mals, as h

DE Lassitudine Ulcerosa. It is one of the first Symptoms that attends any Fevers; and because the Patients complain of Soreness, as if bruis'd, therefore 'tis call'd Ulcerous. This Soreness may proceed from the Miliary Glands, alter'd by the Stoppage. The External Air has Effects enough upon them, to make us think, that, by their Contraction, (and that so suddenly) the Humours, not having forgot their ordinary Courfe, may fome way diftend them beyond their usual Tone, and may occasion this troublesome Sensation of Soreness. And what may add Weight to this Opinion will better appear, if we confider what Symptoms ordinarily supervene the too hasty and imprudent Attempts made upon preternatural Evacuations, where nothing is more common than to find the Part, or adjacent ones, loaden with a Quantity of Matter which was us'd to be thrown off by that Port, and producing Symptoms more or less prejudicial, in proportion to the Parts and Humours then reigning. This leads me to believe, that Weariness may proceed from some Plenitude in the Fibres, where Motion is perform'd offor by the Motion of the Blood and Spirits into the Muscles, or the Stagnation of them there, the Fiestductua ex his succedens tenuis juvat.

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bres may be over-diffended, and grow unweildy and unfit for Muscular Motion; and may occasion this Weariness. But as it requires no distinct Methods from the Fever itself, no farther need be said of it, than that a Languid Fever, and an Ardent one,

must guide us.

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A Vertigo. The Physicians heretofore believ'd it to peoceed from the Rotatory Motion of the Spirits; but 'till the Learned Bellini took it under Consideration, the Manner of their Motion was not fully explain'd. 'Tis certain that Objects, whose Rays fall upon the same part of the Retina, appear to be in the same Place, or at Rest. And on the contrary, an Object at Rest, then is thought to be mov'd, when its Image is painted successively in different Parts of the Retina, supposing the Eye unmov'd.

Now, the Retina and Object are the only Requifites to be confider'd, whether an Object really moves or rests: But when there is a Deceptio Visus circa Motum; an Object appears to move when we know it is at Rest: Therefore we conclude, that fince. the Object moves not, the Retina only must move. Which this Gentleman confidering, immediately begun to thin! how 'twas possible for the Retina to be moved; which could hardly fail to occurr to any Person who knew the Structure of the Parts so well: Such useful Discoveries Mathematicks can and do make! The Arteries then, when over-distended by Accumulation, or the encreased Quantity in flow or violent Fevers, lift the Tunica Retiformis higher than usual. And this Dimotion happens in every Diastole; so that in every Pulsation the Patient becomes vertiginous in Proportion to the Diftention. The Cale of Drunkards makes this more evident; for having stretched their Vessels with a Quantity of an active Liquor, the Carotid Branches are over-fill'd, and thus occasion this Ver-L 3

warmer Regimen and Methods.

Cephalalgia, or Head-achs, are occasion'd by Distention: For the Vessels are either stretched, from the too rapid Stream of Blood, whence the Veins cannot so suddenly return the Quantity contained; or from its too languid Motion; from whence it comes to pass, that the viscid Particles, clinging close to the Walls of the Vessels, obstruct its free Passage into the Veins, and consequently its free Return.

Now, according to these differing Manners of being produc'd, the Methods taken, ought to be various; for in the former Case the Heat is sharp and remarkable, the Pulse is strong: And therefore Bleeding is absolutely necessary, to prevent the Rending of the Vessels or Hamorrhages; and externally we must apply a cooling Epithem to the Forehead of Fol. Rof. rub. colt. cum Aceto acerrimo in Patina Supra Carbones, cui addi potest Sacch. Saturn. ad gr. aliquot, or fuch-like, and make use of Opiate Emulfions, or fuch gentle Opiates as will allay the Pain: for nothing, fave fuch Emulfions, with the Cold Speds, or Syr. Papav. in Barley-water, are fafe. And we must evacuate the Faces (which, distending the Intestines, press upon the lliacks, and hindring the descent of the Blood, the upper Parts are loaden in Proportion to this Impediment) by Glysters of Decoll. Comm. or House-Glysters. But if the Heat be imperceptible, the Pulfe weak and fmall, the Pain is gravative; for then the Blood gravitates on the Membranes by Accumulation. In this Cale give Testaceous and Volarile Medicines for the Fever; throw in a Glyster for the same Reason as

afore-named; and clap on a large Blifter ad Nucham, to revulse the Humours from the Head, to add a brisker and livelier Motion to the Fluids, to hinder their Stagnation, and lastly, to evacuate a Share of the Humours in such a Manner as the Nature of

the Fever can allow of.

Deliria are the Dreams of those that awake: and are Incoherences, occasion'd by a Motion of the Spirits disproportionate to the usual Mean of Nature; for if the Spirits, whose Motions are in Proportion to that of the Blood, move in too full a Stream, the Tubes of the Brain become over-tenfe; and if they are to few, these Channels are not stretch'd enough, and their Course is interrupted. and the Brain too scantily supplied. But though 'tis difficult to explain how our Idea's are confus'd, (for Experiment here is impossible;) yet Experience evinces to us that in either State we talk inconfiftently. Phrensies are the Refult, of the former; and Simple Deliria, of the latter State. However, tho God has united a Form to a Material Being, and the fecret Manner of their Communication cannot lie under our Trials; yet we can come so near as to fay, that our Idea's are the Spring of our Actions; that these Idea's are conformable to the Motions of the Blood and Spirits; and that, if the Fluids move on in an irregular Hurry, our Idea's and Actions are furious; if calmly, tho irregularly, they are moderate; but always, in this Case, unrea-Sonable: For Judgment and Reason are the Product of a certain Proportion of found Spirits, and the right Structure of the Brain. The former is evident from an Exhaustion or Aquosity of our Spirits; and the latter, from Prejudices receiv'd by Falls. Whatever then destroys the blessed Mean God has been pleased to place us under, in any eminent Degree, That infallibly impairs our Senses, and causes a Delirium.

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Deliria

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Deliria then cannot always be remedied by the fame Methods, fince the Reasons of its Rife differ fo much. In the former Case of Phrenzies, the Heat of the Blood is generally pretty remarkable, and the Pulse is strong, (unless the Blood be too much impacted; for then 'tis small, because the Oppression being great, obstructs the Exit of the Liquidum Nervorum into the Villi of the Heart; yer the Actions are still furious, they have Strength enough, and their Eyes are inflam'd) When the Pulse is under these Circumstances, you must Bleed; (where once, often, fuffices not,) and make use of the cooler Regimen: Let them fit up sometimes; and after a while, give Lenients, (if indicated from the Heat abating, and a Sediment in the Uriue; ) at least use pretty tharp Glysters: And lastly, give Opiates to quiet the Vigilia, which are the constant Concomitants of all Deliria. If Bleeding cannot take Place, (because of their Weakness, or the Nature of the Fever,) Cupping (at least) will; where four Ounces weaken not fo much as two from the Arm, though the first be arterial, and the latter only Venal: Because, as Kiel observes, the Contraction and Depletion are, in the former, done in the fame Time, where there is only a Priority of Reason between them; but not often so in the latter. And moreover, this flow Evacuation gives the Fibres leisure to contract themselves by their own Elasticity alone, without any Expence of Spirits; which cannot be imagin'd in the former Cafe. You must also apply to the Soles live Animals split, or Theriac Androm. to allay the impetuous Motion upwards, or Pedilupium Fulleri for the same End. I don't approve of Emeticks; if the Blood-Vessels are already over-stretch'd; for thus you may impact the Blood so violently into the soft Substance of the Brain that it will be impossible ever to tecall it. In Effect, he that confiders how much, Vomit-Deliria

ing haftens the Circulation, or gives himself Leifure to view a Person vomiting, whilst he is bleeding at the Arm, will be convinced of the Truth of what I fay. And more-over, I have feen the ill Effects of it in Phrenetick Fevers, which ought to deterr us from the Use of them. It is every-where believed that Phrenzies do depend on this Cause; which is also confirmed by the Learned Baglivi. And I remember to have open'd one who died Phrenetick: E're I could separate the Cranium, a confiderable Quantity of Blood was spilt; and after its removal, I perceiv'd the Vessels even down to the Corpus Callosum strangely over-stretch'd with Blood, and the Sinus Longitudinalis, and Laterales alfo. This I rather believe to be the Caufe in furious Phrenzies: But the Person, I now mention'd. died of a Comatous Phrenzy. Some Years ago, I was called to one, who was feized with a Putrid Fever: He was Blooded; but the Fever shortly turned up to his Head, and he fell into a Delirium: neither was his Heat great, nor Pulse strong. I order'd him a Blifter: But at my Return from the Country I found him worse, and perceiv'd him to have rav'd more from the Blifter, and his Tongue grew drier; and withal, finding his Facultas Locomotiva vigorous enough, I order'd him a Glyster; after which he was Cupp'd, to no effect, for no Blood would come. I then order'd Bleeding in the Leg to some Ounces, after which I gave him a mixture of Simple Waters with Volatile Salts (because his Urine appear'd Concocted) and Laudanum; to be given at fuch Intervals as to procure Perspiration and give him Rest; and applied Theriac. Andromach. with Ol. Mac. Chym. to his Soles. And thus in three or four Days his Pulse grew stronger, his Urine settled compleatly, and he reof the contrary Thigh, and the them also the best of the the contrary of that Leg. From which happen nems tis

evident.

But where the Heat is small, and the Pulse is weak, and they grow Feeble, with Subfultus Tendinum, and Coma's, then you must steer another Course: You must apply Blisters to the several. Parts, as the Neck, Arms, Wrists, Thighs, and Calves of the Legs, and Emplastra or Cataplasmata Solearia, or irritate the Fibres to continue on the Circulation without Interruption, and internally must give all the Medicines requir'd by the Nature of the Fever to Support the drooping Spirits. One Thing Observable in this fort of Delirium, is, that just before they rave, and while it lasts, the Pulse is generally much eclipsed and deficient. I could mention several recover'd under these Circumstances, whose Beces and Urine dropp'd involuntarily, and whose Extremities have been almost cold, as I have hinted above. In all Deliria, Care must be taken to know what becomes of the Faces and Urine: Heedlesness, at first, may cause them to neglect to urine, which the Fulness of the Bladder may afterwards hinder; for that the Power of the Detrufor Urina being leffened, from the lateral Pressure encreas'd, the Sphinder is less pressed upon; and thus the Facultas Retentrix becomes stronger than the Expultrix, (to express it in the Language of the Antients.)

Convulsions are involuntary Motions of the Muscles: They, in their ordinary State, are subject (by a most wonderful Providence) to an Imperium Anima: and they are not moved but by a joint-Instant of the Blood from the Arteries, and of Spirits into the Fibres. This is the Result of Experience: For, tie the Crural Artery of a Cat at the Insuen, and by this the Insue of the Blood is impeded into the Leg. The immediately loses all Motion on that Leg. below the Ligature. Again, tie the Nerve of the contrary Thigh, and she then also loses the Motion of that Leg. From which Experiments tis evident.

evident, that neither the Blood nor Spirits alone, but a concurrence of these Juices, (or some Airy Elastick Corpuscles, (compos'd of these Juices,) will inflate and move the Muscles. Now, if equal Parcels of these Liquids are distributed into the Antagonists, and equally inflate the Area of their Rhomboidal Vesicule, then these Muscles act equally, and the Part is kept in a Tonick Posture: But if either Muscle has a greater Quantity pour'd into it, That is contracted, and its Antagonist is relaxed; and, vice versa 'Tis plain then, where-ever the Ballance lies, there will the Motion be perform'd: But this being alternate in common Convulsions, will be alternately (but always irregularly) mov'd This may either depend upon that is convulfed. a violent Motion of the Fluids, or one too languid; for in the former, the Fluids, as in the latter, are irregularly mov'd. In a state of Health, unless we command them, they are quiet, and the Fluids are only distributed to them in such a Quantity as may ferve for Nutrition: But when that Mean is lost, by Depravations in their Qualities, or Changes in their Quantities, their regular and stated Motion is fucceeded by another impelling Cause in the Tubes. of a different Stamp from that which is subject to the Will. This is true in particular as well as in univerfal Convulsions.

Bellini ingeniously takes Notice, that where there is such a Paucity of Spirits, as that they cannot equally instate the Muscles at once, there may happen a Momentary Palsy, which beats the Resemblance of a Convulsion. But this is what happens in dying Persons in Fevers; for where one Muscle is so ill supplied with Spirits, as that their Course is often interrupted, for want of a sufficient sulfulness of the Channels; then, where ever that Defect lies, that Muscle slags, and loses its Familiarium; and the other, which has more, is contract-

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ed or convulsed. Hence are these Subsultus, at the End of Fevers; and the Discovery of this Palsy, is from the Weakness of the Pulse, as well as the imperceptible Heat of the Patients at this Time; and then too they seldom want Comatous Deliria, and other fatal Symptoms. But where the Persons are seized with Convulsions under a strong Pulse, and a vigorous Warmth; then we may conclude, that these involuntary Motions evene from the too great Plenty of the Fluids irregularly mov'd. Hence, in short, it may be concluded on, that Bleeding and Sal. prunell., Opiates, and the diluting Medicines, are necessary in the latter Case: while Blisters, Volatiles, and the warm Cephalicks, are Remedies

in the former.

I cannot then fufficiently wonder at the Road of fome Practitioners; who, whenever they prescribe to convulfed Patients, are fure to croud in all the strong Hystericks. without any Regard to Constitution, which ought always to be our Cynosura to fleer by. I know a Lady, who is Crampt upon the Autumnal and Vernal Changes: She cannot bear the Heat of the Fire, without the Danger of being drawn up; and who, upon the common Anti-convulfives, was thrown into the very Fits she was labouring to prevent: She is of a hot Constitution, a quick Wit, and her Pulse and Warmth are quick and strong: But the cooler Methods, of a Milk-Diet, Sal. prunell. nay, even Sp. Nitr. dulc., allay them. I shall mention one Observation more, to confirm, that Convulsions are cured chiefly by a Regard had to the Temperament: I had a Patient, who was feized with that Species of Cramp, called TRISMOS: She had just so much Room left, as that she could be nourished with Liquids. However, her Mouth was so violently shut at some Times, that the was forced to use a Wooden Wedge to keep it open. The Difficulty I labour d under, was, how I should discover whether this could be called a Palfy of the Digastrick Muscle, or a Contraction of the Crotaphites. I found that the Distinctions, given in by Riolanus, and some others. mif-led me; for having applied a Blifter to the Nucha; as foon as this began to have its Effect, I was made very fenfible of my Mistake; for it threw her into Cramps in her Arms and Legs. Upon this, I had Recourse to a different Method, and gave her what would not heat her, along with Opiates, at due Distances; whereupon she grew daily better; and in fix or feven Days open'd her Mouth perfectly well. This, besides many other Arguments, convince me, that Convulsions are not to be taken off. without a due Regard to the Temperament. The best Distinction I made use of, to discover whether this was occasion'd by a Palfy of the Digastrick, was thus, I perceiv'd that the Digastrick did move the Jaw a very little downwards, which a Paralytick Muscle could not have done.

Lethargi, Catalepses, Cari, Comata, Apoplexia, are profound Sleeps, and Degrees of them, which I shall not stay to name. Sense and Motion depend on a certain Distribution of Spirits into the Organs. without which 'tis impossible for them to act: And an Interruption of these Sensations and Motions depends upon a Stop put to these Distributions. Now, if the Blood gravitates on the Membranes, the Medullar Substance, and the Origine of the Nerves, 'tis evident that the Passage of the Spirits must be obstructed; that there must be a Privation of Sense or Motion, nay, of both; fince either are but a Consequence of some Degree of an interrupted Stream of this Fluid into the Parts. This Cafe may happen from either State of Blood: For, how frequently does it occurr, in the beginning of Fevers, along with a strong Pulse, that a Sopor happens? Now this cannot fall out without an Accumulation.

mulation, and, consequently an Oppression of the Parts affected. If the Pulse is small, some Particles of the Blood are propell'd 'till the Arrival of others; and the flow Motion heaps up too much, at least, more than can be re conveyed in a scasonable time; so that it gravitates, oppresses, and obfines the Pallages. And thus the Spirits are not rightly distributed to the Parts, and, consequently, Motion and Sense are prejudic'd; and the natural Sequel is one of the above-named Symptoms in Proportion to the Caufe, I don't at all queffion, but this Oppression may often happen, from an Obstruction somewhere in the Infundibulum, or its subjacent Gland, from a viscid Matter impacted; and then the Ventricles fill with Serum; And, in Effect, I have fince remark'd, that Lower. de Corde, p. m. 71. takes notice of this very Case: But this Sort, I am apt to believe, oftner, if not only, occurs in Chronical Cases; as do Convulfions, from the Suppression of an usual Flux from the Nofe, which I have feen so herce, as to pervert the Axis of the Sight, to convulle or contract the Infundibulum, to hinder the Return of the Lympha from the Ventricles, to fill the Brain with Serum. and to destroy.

The Difficulty of the Cure depends on the Degree of the Impaction, which is often irrecoverable, because the Vellels are sometimes broke, and Blood is extravas'd on the Membranes, or even driven into the Cortical and Callous Sustance of the Brain: And as 'tis impossible to tecall this, into the Circulation, Death is inevitable; but where the Fulness of the Vessels only occasions it, then Evacuations are to be made use of: And because too much Blood is heap'd up, therefore, in the former Case, large Quantities of Blood are to be drawn off, from the Jugular, (as being an immediate Drain from the Part affected) upon a double Account, which

is that of the violent Motion, which hurries in, too large Supplies, to the Quantity already lodg'd: And thus we answer the two-fold Indication of discharging the Load, and allaying the Commotion; by which laft, fresh Supplies are cut off. Here too tis usual and useful to apply Blisters; for the' they are really contra-indicated, with Regard to the violent Motion; yet, where we are oblig'd to rifque a small Damage, for a great and certain Advantage, Reason will instruct us to ballance the Scale: For the strong Oscillations of the Membranous Fibres by which the Fluids can be burry'd forward, are more than a Ballance for the Commotion they add to, for, by them, the Capillaries are fqueez'd and their impacted Contents are driven forward. from a Conquest over all the Refistances. As to the Rest, 'tis well known, that Apoplecticks with a Plenitude, and in hot Cafes, bear no Volatiles! but require Sulph. Vitrioli. and fuch cool Medicines.

Dr. Cole is very lavish in original Appoplexies but the Fever being prior to the Symptom, obliges us to be wary here, in the Quantity drawn off. In thort, if the Stomach is laden with any Saburra, Emeticks are very proper, as also Catharo ticks are to be us'd; and (if occasion requires) Steron nutatories. Dekkers orders very sharp Glysters. fo far as to cause Blood to come away. Bayle's Cause tion about Emericks, and Sennerrus's about Stees nutatories, are not without Grounds, which are thefe: Where there is a Plenitude ad Vafa, the Succustions, (whether by Externals or Internals) mayni hazard the Rupture of the tender Vessels of the Brain, which are of themselves too flexile; and asw the Substance of the Brain is soft, and yields to any, even the leaft Impulse; the Consequence of fuch an imprudent Proceedure would be an irremediable Effusion and Death. Where these Disorders happen to the weeker People, to the fedater Fevers, with

Shibroxil

with small and languid Pulses; Blisters are the safest Remedies, along with volatile Medicines, to rouze them, and add Vigour, as Experience has convinc'd us; for otherwise you take off the Disease and the Diseased together. 'Tis necessary to consider how Fevers, if Epidemical, terminate; for if they end in such dangerous Symptoms, it will be necessary to prevent them, if you are call'd early enough. As to those Apoplexies occasion'd from the Ventricles sill'd with Serum, the Discourse appertains not to this Place; neither do I see any Method whereby to evacuate this fatal Plenitude.

Watchings are the common Refult of either State; and whether the Motion be too violent, or too flow, they generally are watchful: Tis indeed, in the former Case, more usual to hear them complain of a Pervigilium; and this also is commoner, where any Eruptions are about to enfue. Sleep feems to depend on a Quantity of Blood, not circulating freely: Our natural Actions require and presuppose a Stock of animal Spirits: And a State of Quiet, free from the Hurry of a Blood variously agitated by our Muscular Motion, is the fittest Opportunity to have them recruited. We cannot well doubt how fuch Quantities are stor'd up, if we take a view of the Structure of the Brain, and its Bulk, in proportion to the Nerves that run from it: For if the whole System of the Nerves were quoyl'd up, they would hardly amount to the Bulk of the Thalami nervorum opticorum; from whence it may be inferr'd, that these large Protuberances, at the Exit of every Nerve, must be so many Tubes, turgid with almost an Overcharge for the Fibrils of those Nerves that are without the Brain; fince each Thread of every fuch Nerve is but Productions of the former, and not more numerous than they: And thus the Brain is a Fountain of Supplies. Hence the Stock bred in Sleep, is, in Proportion to our Exercise.

Exercise, expended and exhausted, in the Day-time, by every Action. Now, as the Expence is confiderable, the Fibres must fink in their Dimensions; and, containing less Fluids, will approach nearer to a Contact. Thus 'twill fall out, that our Body will naturally cease from Action, that the Entrance to the Particles of Blood will be flow, and this Liquid will be heap'd up in the Brain, and the change of Posture will eafily retard the Circulation, 'till the Brain; again turgid, restores it, and then we awake. Thus tis likely that Watchings confift in a certain Tenseness of the Fibres of the Brain; and as too rapid a Motion fills the Tubes and keeps us awake, fo one too flow, makes me believe the viscid Particles (which are the Vehicle of the Spirits) are too groß to enter the fmall Fibrils of the Nerves without the Brain. and it may be kept stretch'd with an Overload, whilst a Penury is evident without it: And thus Convulfions often happen from an unequal Distribution of Spirits to the Parts. And here 'tis evident, that some Nerves are often obstructed. whilst others are too plentifully supply'd, and all the while the Origin of Sensation is confus d: For what is more common than, in, Delirium's to be afflicted with Subsultus Tendinum, and involuntary Effusions of Faces and Urine?

The Cure of Watchings, is perform'd by correcting the Motions. For Bleeding (repeated as requir'd) in the Ardent Sort, leads the Van; it ventilates and hinders the too plentiful Afflux to the Brain. Diluents are here necessary too, from the Nature of the Fever, and Syr. Papav. Rhead in Barley-water, or Emulsions, are requir'd. And we must proceed thus, till we gain our Point; for as Symptoms are Arguments of the erring Motions; so long as they last, we must persist in proper Methods adequate to the Ailments. Sleep is the best

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Concocter of Humours: For Sanctorius tells us. Dormientem plus perspirare Vigilante, he only means, if moderate; becaute he tells us, Per nimium Somnum Interiora & Exteriora frigescunt. If the Watchfulness proceeds from an opposite State of Motion, 'tis very conceivable, that Opiates are dangerous: And indeed, I never have found Them given in fuch a Case, but that, after the Administration, they grew more languid and faint; their Tongues became drier; their Pulse weaken'd; Gravative Head-achs, and Delirium's did supervene, along with Subfuttus and Coma's, and all the Tokens of a Failure of Spirits; and therefore, in this Case, 'tis only safe to trust to the Blisters, along with the volatile and reftaceous Medicines requir'd by this State of Fever.

Vomiting is an immediate Result of a Convulsive Motion of the Coats of the Stomach, along with (if not only, as the ingenious Dr. Purcell says) a Convulsion of the Abdominal Muscles; some extraneous Matter, spued from the Glands into the Cavity, galls its Walls, and invites a copious Inslux of the Spirits, and convulses it to exonerate; for Evacuations are a constant Consequence of Irrita-

tions.

-80.)

I have seen a Cholera proceed from Excoriations along the Canal of the Stomach and Intestines. This often happens to Children who have the Aphtha, and an Evacuation of green Choler. I saw this once happen to a Lady, in the Year 1699, who had labour'd under the Flux-Pox, and who, after the Desquammation, fell into a Hedick; she, (before any thing was taken) fell into a Vomiting and Purging, and voided vast Quantities of Scales, along with a Brown Sanies; till, at last the Gula and Parts about the Pharynx were so excoriated, that she refused to take any Thing; expressing her Choice

Choice of Death, rather than she would undergo

the Rack of fwallowing.

Whether this Symptom be under the Ardent or Hellick Sort of Fever, somewhat must be superadded to these Medicines, for correcting the sharp Particles extravas'd; as also such Medicines must be given as will allay the Irritations, fuch are Opiates, &c. Riverius's Mixture is very good (viz. Succ. Limon Cochl. j. Sal. Absinth. 9j.) or if Cordial-Waters, both simple and compound, along with Testaceous Medicines (and Opiates in violent Vomitings) be added, twill be more effectual. But it often happens to be a Critical Effort, as Alleviation, and the concolled Urine do testify; and then we may encourage it with gentle Emeticks of Pulv. Rad. Hypocacuan. Sal. vitriol, &c. but even Chicken-Broth is sufficient, where there is a great propenlity to Vomit: And when you have emptied their Stomach's enough, then give the Anti-emeticks above-named. As to the Vomiting from Excoriations, nothing conduces in it, fave the smooth, mucilaginous, and glutinous Medicines; as I have found in a Gentlewoman, who, from a strong Emetick given, threw up a Scirrhous Piece of Flesh which had grown on the Stomach; after which the could retain nothing, fo long as the mucilaginous, oily, and opiate Medicines; but neither them in any Quantity. And so we see, how, in common Aphtha. the Gargarism Alb. cures them, they proceeding from the eroding Particles of the Saliva, which this Gargle successfully obtunds.

Dysenteries, or Diarrhae's, may accompany all Sorts of Fevers. I have already said, that Evacuations presuppose an Irritation, and it is therefore, by all, assign'd as one of the first Causes; and 'tis probable, that some Particles, slowing from the the Blood, are deposited in the Intestines; and that, by this Stimulus, the Motion of the Blood is deter-

min'd thither by the forcible Contraction of the Membranous Villi: From whence it is manifest. that the Tubuli, and Channels of the Vessels are fill'd and stuffed with a Quantity of Blood. And the more flexile the Guts are, and the more incapable they are of any strong Refistance, the easier they yield to the Moment of the preterfluent Blood. and the more they are stretch'd; from whence will follow an Effusion of their Contents. The greater the Distraction is, the greater will be the Quantity, which will be thrown off: A less Distraction will only give an Exit to the thinner Particles, but'a greater, to the Blood itself. However, unless a general Plenitude gives Rife to a Flux of Blood, it commonly happens from an Inflammation of the Parts, and sometimes 'tis a Sequel of a Critical Diarrhæa. Effusions of Blood are of known Danger, since even Diarrhæa's are esteem'd of ill Confequence, especially if the Persons are weak, the Flux be symptomatical and plentiful; or if they come upon any Eruptive Fever, so as to weaken. Drink Decott. Alb. in both Cases; give the Testaceous Powders, and even Opiates, fuch as Theriac. Androm. Diascord. Fracastor. &c. If Bleeding can be bore by the Patient, 'tis requir'd in a Dysentery. A French Gentleman, of the Society, brought over from Cayenne, in the Year 1710, a Root (or Wood) of the Figure of Bryony, so porous, that in a piece of eight Inches in Length, a Candle might be blown out through it, which effectually rakes off a Dysentery in two Doses; as I have had Occasion to make Trials in the present Case, which produces no other Change, fave immediately checking the Flux: A Specimen of which I made a Present of to the curious Collecter of fuch Rarities, the Hond. Sir Hans Sloane Bart. M. D.

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Colicks, Iliack Passions. It does not always happen that these Pains depend on Inflammations of the Guts, (as Screta will have it; ) for it does not constantly fall out that the Pain is fix'd in one Spot. nor that the Faces, in passing, create a Disturbance; on the contrary, it comes to pass that there is an Obstruction (partial or total) of the Faces, and the Pain runs from one fide to the other, as the Tract of the Gut lies, which shews that there is another In Fevers, the Heat of the Parts (depending on the Juices that pass through them) has an Effect upon the Juices, &c. that lodge in the Cavities: And Consequently, whether there be any Phlegm sticking to the Coats, or Faces in the Passage, this Heat can raise the one into Bulla; (for Water and Serum we know, can be rarefy'd into Air) Part of which fills the Cavity; whilft the Bulk sticks to the Intestines, and inflates 'em; or the Humidity may be evaporated from off these Coats, and the Faces may stick in their way, downwards; and may, in Proportion to the Driness of the Fibres and Faces, produce an Obstruction; and as there is a Detrusive Motion, by a Peristole, more is heap'd up, the Parts are more diffended, and the Pain becomes less tolerable.

So far as the Cure of this Pain is Contra-indicated by the Remedies proper for the Fever, so much Danger it carries along with it; because we are often forc'd to have recourse to Evacuations, which retard a Regular Crisis; or to Obtunding Medicines,

which are as Dangerous as Evacuations.

If we find that the Pain is fix'd about the Navel, that they pass the Faces with Pain at a certain Place; that the Faces change their Figure; that Breathing affects the Place, and the Pulse be very vigorous, we may may conclude 'tis an Instammation. In this Case, you must Bleed as much as the Strengths of the Patient will allow, and repeat it as Occasion M 3

requires. Throw in Emollient Glyfters frequently, which serve as Fomentations: Give 'em Cooling Emulfions warm'd, and gentle Anodynes. If it proceeds from any other Cause, and if Glysters do'nt answer, as they never do, when the Continent Cause reaches higher than the Beginning of the Colon; then Recourse must be had to such Catharticks as, we judge, will have their defired Effect: And because, by this necessary Method, we endanger the Regular Crifis, by weak ning the Patient; therefore we must have Recourse to Opiates, for allaying these Contractions along with such Alexipbarmacks as the Case requires: And if it yet mounts higher, as it does in the lliack Passion, Opiates ought to be mix'd (as the prudent Riverius advises) along with the Purgatives, and Mercurius Dulcis too.

Nausea; Anorexia. The first, I take to be a Diminutive Vomiting. The latter, indeed, depends on a certain Structure of the Stomach, as well as a certain and determinate Quantity of an Esurine Juice; for an Atony or a Defect of this Natural Juice (whose Nature is chang'd to an Exotick one, and ouzes into the Sac) destroys the Appetite. Whenever we find the Patient seiz'd with these Symptoms, (after the Horrors, which seize prior to all others,) then a gentle Emetick is very convenient; or, if the Patient cannot bear one, a gentle Lenient may suffice: Which sometimes may be repeated, 'till the Symptom abates: And thus, too, the Fomes of the Fever is lessen'd, and prepared for

farther Alexipharmacks.

Thirs, or the Sense of a Want of Liquids, generally bears a Proportion to the Driness of the adjacent Parts to the Mouth, unless they be Delirious. The too violent Circulation hinders the Secretion of the Saliva; or the too slow makes it Viscid; and the Lungs contribute to it too, by their hot Ffluvia through the Nose and Mouth. In the too violent Commotion

Commotion of the Blood, Acids, with Watry Medicines, do best; then Barley-Water, with Fuice of Lemons, Sal. Prunell. Claretum Cober. Water and Toast are here most proper. But where the Spirits are weak, these are so far from abating it, that they clog 'em more; and then 'tis best done by Thea, Sack-Whey, and such Materials as will open the Glands.

Horrors, Rigors, are those Shiverings from whence we date a Fever, or such as come on at the Criss: They are Convulsive, (shall I say, or Paralytick?) Affections of the Muscles, from the Irregular Influx of the Spirits into the Fibres; which are either oppress'd or detatch'd irregularly, and so are a Bar to the Circulation in the Extremities, or have some Acrimony in 'em that occasion this Irritation. If they continue long, you are oblig'd to give 'em Volatile Medicines, Brandy-Spirits, or warm Wing. They are not always Attendants on the first Paroxysim; but in Malignant Cases, and before great and Critical Sweats, they frequently come on.

Pains, are troublesome Sensations, arising from some disproportionate Object inhering in the Part affected, or periodically thrown there: And as this may be either in the muscular or nervous Parts; so the Cause may affect either; but with very different Consequences; the one not having so exquisite a Sense as the other, will not produce so dangerous Sequels, nor require so potent Remedies. Now the Cause which produces these Pains in different Parts, may be one and the same, and may be but the Result of the different Variations of the Texture of the Fluids, or their Quantities, metaphorically increased: For as, in the first Case, the viscid

Particles of the Blood are forc'd through the Capillary Vessels, with some Difficulty, in proportion to the Sense of the Part; the Pain is proportio-

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nable

nable to the Distension of the Fibres beyond their usual Tone: So, in the latter, the Diameters of the Vessels being over-and-above enlarg'd, become an Impediment to the Circulation, over-stretch the Parts, and occasion the same Disorder: But in Spalmodick Pains, the Case is very different, these being Cramps, or painful Contractions of the Muscles, from some irritating Cause; these are the divulfive, jerking Pains, that draw the Muscles into involuntary Motions, and commonly have Subfultus join'd with them. Sometimes Pains in Fevers are more Epidemical than at other Times, from the Nature of the Air's Rarefaction (abstracting from any other of its Qualities: ) For as it is observ'd, that a Bladder, half blown, swells, upon pumping; fo also it is remark'd, that Animals swell, upon pumping too, in a Ratio to the Quantity drawn off; fo do all Liquors follow the fame Meatures. Thus, in warmer Weather, the Denfity of each particle of Air being lessen'd, the Blood in our Vessels, in Proportion, rarefies and diffends, and ftops in the Capillaries; and according to Mr. Boyle's Observations, upon his own Hand in the Air-Pump, violent Pains arife. But whatever is the Original of thefe Pains, Opiates are always one Requisite to allay them. If the Pain be Inflammatory, Bleeding ought to be made use of, and repeated as often as it is necessary; and afterwards we must give Attemperants and Diluters of the fizy Parts. the Pains are purely Spasmodical, arising from diforderly Motions in the Spirits, Opiates (with Volatiles, if the Spirits want rearing) are the proper Remedies. If from particular Acrimony lodging any-where in the Stomach, as in Cardialgia, then the Testaceous Pouders are convenient.

Verminous Fevers are of all Sorts; and, over-andabove the Medicines and Regimen indicated by the Fevers themselves, you must add the anti-belmintic

Medicines.

Medicines. There are no Symptoms which they do'nt introduce; and whenever Symptoms evene that are arona, or referrible to no Head, we ought to suspect These. The Nature of the Fever diverfifies the Vermifuges; for that, in the warmer Kind. Coralline, and fuch-like, are only Proper; whereas. in the Hectical Sort, Ens Veneris is a noble Medicine. I was call'd to fee a Boy, Four Years Old. who had fallen into a high Fever, with a Delirium: Immediately upon Seizure, I order'd him Bleeding, and cool Emulfions, which took off the violent Commotion and Deliria; and when the Child came to himself, he complain'd of a violent Pain in his Belly, an Itching of his Nofe; and the Mother perceived the Startings, with the Gnashing of his Teeth, when asleep. I order'd some Vermifuge Medicines in an Electuary; upon which he voided a large Worm, and the Fever ceas'd, and he recover'd. Every little Symptom of Worms ought to be fuspected, and provided against, fince these Medicines, well fuited, are not contra-indicated by the Fever. And thus I have immediately (tho' much contrary to my Expectations) cur'd feveral advanc'd in Years; and particularly a Gardiner above Fifty Years old, who complain'd of fome Symptoms which feem'd to argue that he was troubled with Worms; upon blending Vermifuges along with the Medicines proper for his Fever, he voided fuch Quantities by the Mouth, that he had almost been choak'd by them.

Puerperal Fevers are Shelves the poor Females are often stav'd upon: They are generally Inflammatory, from the Inflammation of the Uterus, which arises from the Suppression of the Lochia. Custom has prevail'd among the ignorant or obstinate Midwives, to allow the Laborants Chickens, and fuch Flesh-Diet, as they pretend cannot prejudice them; to rife out of Bed three Days after their Labour,

and to take fome Turns a-cross the Chamber; from whence I have seen the Lochia stopt or leffen'd, and thence have arose Deliria, or dan-gerous Fevers; and yet 'tis easy to prevent these, if the Ladies can be Aw'd. 'Tis common for hard Labours to produce them, as I have often known. If we are called in immediately after the Mistake, it may be prevented, by administring Pinsture of Costor, or Spirits of Hartshorn in Ruewater &c. and giving them their Diet warm, and fo disposing them to Sweat. But when the Fever is begun, if they be Plethorick, and the Fever of the warmer Species, Bleed in the Arm, and then in the Foot; and after this, throw in emollient Glysters to dilate (by the Manner of a Fotus) the Orifices of the Glands of the Uterus, whence the Lochia will flow afresh. Alexipharmacks (with the Cautions above-nam'd) must be given, and the Diet shou'd be cooling or refreshing. If Inflammatory Symptoms come on, such as Pleurisies, Angina's, Peripueumonies, &c. you will see below how to treat them.

If the Lochia are past; Bleeding and Purgatives (if indicated) may fafely enough be made use of,

as I have often experienc'd.

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Inflammations, (fuch are Pleurifies, Peripneumonies, Pneumo-Pleurifies, &c.) arise from a viscid Blood stopping in the Capilaries, and distending the sensible Parts beyond their ordinary Bounds. Now tis conceivable enough how this happens; for if we consider the Structure of the sethy and membranous Parts, we shall find that their original Contexture is Reticular; so that a Bar put to the Motion of any Moment of Blood, will swell and enlarge the Fibril that contains it, by the Quantity that follows. This Encroachment upon the neighbouring Fibres will also straiten their Channels; and thus hourly the Infringment encreases,

ses, and, in Proportion to the Circulating Mass, the greater will be the Impaction. The larger the Distension, the more intense the Pain will be; 'till at length, by Art, or Quantity, the Vessels are stretch'd with fermenting Contents beyond a Possibility of containing more, and then they Imposiblemate, and create Abscesses, by the Matter extravas'd, from a Breach of the Fibres, into one common

Receptacle.

In all fuch Diforders, plentiful Bleeding is abfolutely necessary; for whether we consider that the Pain railes and keeps on foot a violent Fever, or whether that the Rifque of Imposthumation is run for the Want of it, 'tis upon both Heads indicated. In which 'tis far from being necessary then only to cease, when the Sizy Blood appears no more; for thus we should act blindly; fince this Blood sometimes appears not, from the very manner of Bleeding; for in a small Orifice, those Drops that fall into the Dish coagulate too soon to swim on the Cake, as this Size does, as being lighter, and confequently, loses the Power of mounting; but also the Pulse ought to guide us in the Evacuation. Give em the cooling Ptisans of Barley-water, Li-quorice, Raisins, and Figs; in order to difficulte, and divide the Proximity of the dilaniating Salts: and to obtund and dilute 'em : Give 'em Sal. Prunell. in their Liquors; which will sheathe the Acrimony of the Juices; but avoid Acids, for fear of further Coagulations: Give 'em Lintus's of Ol. Amved. d. Syr. Capillor. vener. and Sal. Prunell.; which Mixtures contribute to blunt the pungent Salts; and if the Matter be lodg'd in the Suface of the Bronchiat hey are also conducive to give a just Confiftency to the Sputum, to disengage the Adhesion, and to promote an Easy Expedioration: Give Cordials of Ag. Lattuc. Paralyf. & Syr. Violar. a-long with some gentle Opique of Syr. Papau. Rheed and fuch-like, for supporting the Spirits,

and allaying the troublesome Sensations usual in such Inflammatory Cases: We may anoint with any emollient and discutient Ointments, which will relax the Parts, become too tense by the impacted Humours. Care must be taken of catching Cold, which I have found, even when Affairs went well, undo all. I have known some Pneumo-Pleurisies so quick as to spit Blood of a bilious Colour from the Moment they were seized; but such carry great Hazard along with 'em, especially if the Patients are of a full Habit, or have got it by a Debauch: and these are what Jodocus Lommius

calls Erysipelas Pulmonum.

To know whether a Pleurify be an effential one or the Symptom of a Fever is very necessary to a Physician; the Want of which Scrutiny, has colt many Lives. I remember to have been call'd to a Young Man who was feiz'd with the Symptoms of a Fever, (Rigor, Head-ach, Nausea, Faintness, Heat, and Quickness of Pulse;) he took, as the Custom prevails, a little Theriac. Androm. to raise a Sweat: It had the defired Effect, and he had the Remission of half a Day; but venturing abroad, in the Afternoon he was feiz'd with a Pain in his Side; for which the Assistant, taking it for an Essential Pleurisy, bled him plentifully; (he never spit Blood, as far as I could learn; ) after which he gave him Physick, and then relied on Pettorals. I was defired by the Apothecary his Master, to visit him: I found the Symptoms as I have described them, along with Blifters rais'd on his Hands also; he was anbelous, with a Pulsus myurus, a dry black Tongue; comatous, and with Subsultus; and, in fine, he was attended with all the Symptoms of a fatal Fever, of which he died the Day after. The Discovery is thus: Any Diforder is Symptomatical, when it succeeds another preceding Disease; when the Symptom encreases or remits as the Distemper that first seiz'd

does; and when the Symptom is periodical. As to the particular Case in Dispute, Sydenham tells us, p. m. 223. In tali Casu Symptomata Febris, Capitis Dolor, Artuimve pracedunt; Expirante Pleuritide durant. And again, Ballonius Epidem. fol. 238, says, In omni Febre Essentiali cum junctus est Dolor Lateris; Febre aucta, Dolor augetur; at in verà Pleuritide; augetur Febris, aucto Dolore. The Reason of so careful a Distinction, is, because tho' the Pleurify requires many Bleedings, the Fever cannot allow of fo much; and besides the Fever requires other Med'cines, than the Pleurify does, when an Original one. What I've faid, of diffinguishing Pleurisies, Peripneumonies, &c. from Pleuritick and Peripneumonick Fevers, &c. must be apply'd to Original Rheumatisms and Rheumatick Fevers; where the profuse Bleedings indicated in the former, are inemendable Faults in the latter. As for such who are so unfortunate, as to labour under Inflammatory Symptoms, and at the same Time a weak Pulse, a gentle Warmth, and other Concurrent Signs of a Paucity of Spirits; although they are justly deem'd to be about to fink under the worst of Circumstances; yet somewhat remains to be done, and the Physician must then proportion his Diligence to the Danger. In this Cafe; the Viscid, impacted into the Capillary Vesfels of the Pleura, the Lungs, or Both (as appears by a Pleurisy, a Peripneumony, or a Pneumo-Pleuritis) or indeed elsewhere, requires Translation and Evacuation; neither of which, in Inflammatory Cases, should be effected by any Means which will raise Commotions in the Fluids; fo that we have but a small Compass to move in; Bleeding then and Emollient Fotus's apply'd at a Distance from the Part affected, as also common Clysmata, are call'd into Use: But under the present state of Affairs, Bleeding is justly suspected by many Cautious Gentlemen:

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tlemen; because the Patient's Spirits wo'nt bear fuch an Evacuation, notwithstanding that their Difease, indicates it; and moreover, Blisters wou'd be conducive as wou'd also warmer Alexipharmacks, in order to revive their Spirits and rouze em; which, on the other hand, are Contra-indicated by the Inflammation: The Danger on either fide is great and equal; and therefore must we proceed in the following manner; fince Bleeding, in such a Case, is absolutely necessary, and we cannot safely do it with the Launcet, for Reasons already nam'd; let Blood be drawn by Cupping and Scarification, to fuch a Quantity as the Patients can bear, and let the Fomentations, made of Fol. Malv. Alth. Sem. Lin. Rad. Lilior. alb. &c. be apply'd to some distant Part; give Cordials adequate to the Want of Spitits and the Nature of the Fever; apply Blifters, even sometimes to the Seat of the Disorder, (particularly if the Head or Pleura be affected; ) and use moreover whatever is indicated by the Causes denoted from the Symptoms.

Symptomatical Sweats, are fuch, where the Difeafed find themselves no Better, if not Worse. In all Sweats, the Serum is express'd and squeez'd out of the Pores; but whether it be Symptomatical, 'tis best guess'd at, by the Effects, and the Crudity of the Urine. Some of the putrid Particles being as yet blended with the Serum, may pass the Glands; and thus it often happens, that when a Decifive or Critical Sweat comes on, there is less to be pass'd: And therefore if Symptomatical Sweats are not immoderate, they are not immediately to be curb'd; because they are preparatory to Critical ones. The Febrile Ferment feems to be lodg'd in the Serum only; because either a Sweat or the Urine will carry off a Fever; whereas Hamorrbages do it only per Accidens; this being mostly a dangerous, or an unfaithful Crisis at belt. How too quick

quick or too flow a Motion may occasion em, I conjecture, may be thus. We are fure, the Openness of the Pores must give the Outlet to the Watry Particles; they must either be squeez'd out by the Weight of the Circumambient and Containing Fibres. which having loft their Tone, from the Lofs or Want of Spirits, (which, we know, keep 'em Tenle to a Connatural Degree, that their Walls may not approach to a Contact) do collapse and flag, and cause the Liquids to obey their Oscillations. Now, by how much the Weight of the Fibres is beyond the Resistance of the Serum they contain, fuch Disproportion is there in the Efflux of Sweats; so that in this Case somewhat will be extruded; but the Syncope's along with the Coldness of what is expell'd, as also the Clammines of it, argue a mighty Vappidity of the Liquids, and a Decay of Spirits. This is the Cafe in fuch Fevers as commonly merit the Denomination of Malignant or Pestilential; in which the Indicia of Vigour are wanting, and the Spirits are either fix'd or evaporated. But in fuch Fevers as approach to the Ardent Kind, the Reason is very different; for the vigorous Propulsion of the Blood, fills and diffends the Channels, and It, like rapid Torrents, o'erflows its Banks; so that the thinner Parts will be thrust off more or less vigorously, as the Channels are more or less full; yea, it often happens in this Case, that Hamorrhages are a Sequel of this extraordinary Commotion and Diftenfion. The Destruction of the Equilibrium in any Degree, is dangerous; and as these Sweats are Index's of an Excess or Failure of Motion in our Fluids, they require the same Methods as the Fever indicates, only that the Degree may be aftertained and encreased by them.

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Eruptions, Spots, Buboes, Carbuncles, &c. Many Instances from the most approv'd Gentlemen in the Faculty, as well as our own Experience, convince us, that they proceed from either Condition of Effervescence. The Serum plac'd on the Fire, congeals, in a short time, into a Crassamentum Album; in which about one Third of its Weight is loft, to make it do fo. Now, Heat acts in us, as it does without us; and thus, we conclude, that the Thinner Parts evaporate and leave a Viscidity in the Tuices; and this Viscid Blood stops at the Capillaries, (whose Diameters want Room to receive It;) and the Liquors behind, pressing on without free Passage elevate the Cutis into Pustules. Now this Intumescence may either depend upon the Juices which become Viscid, from Evaporation, or other heterogeneous Mixtures that coagulate the Blood; and consequently, either an Ardent, or a Hestical Sort of Fever, may produce 'em. But if they once become considerable when form'd, they require particular Remedies: Thus Bubo's require Maturatives; nay, Causticks, or the Lancet, rather than they should retreat; and then Digestives, as do common Ulcers: Only the Physician must be wary, not to Bleed when a Bubo appears, (unless the Motion overbears extravagantly;) nor must the Blood move to impetuously as to raise Sweats: but gentle Alexipharmacks must be given to support the Spirits. Carbuncles are known by Blackish and Purple-colour'd Pustules, inflam'd at the Bottom; they are generally Mortal: The Actual Cautery applied around 'em; and then Digestives, as in Ulcers, Cure 'em, (if possible.) Parotids are to be treated as Bubo's. I need not repeat here, what I have faid of Imperfest Crises, and therefore I shall here supersede any farther Notice of them.

Hamorrhages may be occasion'd by the Breach of the Vessels, either from the Distension caus'd from the Ardent or Hellical Sorts of Fever. I here fay nothing of Critical ones, which must be suffer'd to run as long as Symptoms abate, without Diminution of Strength. The Heat of the Room, contributes much to them: For the compressive and restitutive Force of the Air being in a reciprocal Proportion; as much Weight as it loses by the Heat of the Room, fo much will the Globules expand and enlarge their Dimensions, and over-run their Limits. We must make Use of all the Astringent Remedies to close the Vessels. fuch are Seyptic: Regis, Sacth, Saturn. Sang. Dracon Acet. Stillatit. Coral rubr. Croc. Mart. astring. Conf. Rosarvubr. Syr. Myrtin. along with Aq. Plantag. Germ. Querc. and fuch Things to mix with them. But externally, I find nothing better for Hamorrhages at the Nose, than to blow up a little Colcothar : It pains them a little for a while, but does effectually check 'em; (first having made them blow out the Cakes.) Rofe-Buds, Equiferum, Plantag. and fuch Things in Decottions, do well for Forus to other Parts of selving vistely of

If any Fluxes happen in the Small-pox, Measles, or Peltis, after the Eruptions; such are, a Michael Sanguineus, Lochia, Menses, Dysenteria, Hamoptoe, Diarrhæa, Cholera, and Lochia; whether one; or more together, as the Lochia and Dysenteria, &c. we are obliged to curb the Flux, and mingle such Medicines as may comfort and support the Spirits; but these are desperate Cases.

If any Inflammation (such is an Angina, a Pleurify, &tc.) comes upon a Puerperal Fever, when the Lochia are present; 'tis also a dangerous Case: However, the Inflammation being the more dangerous Symptom, must be cured by Bleeding, N (not

(not exceeding,) and yet not neglecting the Fever; but, as Vidius has it, Quis autem est iste sui Exploratum id semper esse possit : Quisve eum De-ledum teneat, ut, ubi Cogitur, minus Malum susci-

piat Causa majoris Evitandi?

Opthalmia, is a frequent Diforder after the Small-pox. The Reason of Inflammations being given in above, I shall not here repeat it; but shall note, that besides Bleeding, and Catharticks mix'd with Mercurials, the common Topics in Collyrium's do often fail; as, I remember, happen'd to a Child, who had made Use of all the common Remedies, and yet remain'd entirely Blind on both Eyes; The Eye-lids were Scirrous. But after a Sufficient with Cinnabar, a Cataplasm with Emollients and Discutients, cover'd with Cinnabar, with some of it mix'd in a Collyrium, we recover'd her, after she had been Blind for above a Quarter of a Year, and was thought past Recovery.

Dropfies frequently follow Fevers, from the Exhaultion of Spirits, and the Small Liquors drank in the Time of the Fever. But a Dose or two of M. P. Rud. with Merc. Dulc. will evacuate the Watery Particles from the Blood; and the Infusions of Bitters with first and volatile Sults, will prevent its Regeneration, by invigorating the Mass. As to Local Faults, (such are Phymoses,) Discutients, after Evacuations, are necessary.

Diabetes. I have known this unlucky Symptom happen after the Mealles; whether from any fusing Frinciple in the Blood, or any Laxity in the Kidney-Glands, or both, I shall not determine; only I shall remark, as Sydenbam does, that a Diarrhae and Diabetes are cured by the same Methods, (viz. by Rhabarbarates, Agglutinants, Mucilaginous Drugs, Stypticks, and Opiates.) I have found the German Spaw-Water to cure it,

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(by correcting the Acrimonious Humors, and confiringing the Glands,) after proper Evacuations. This is call'd Febris Uretica, when it happens with a Fever.

# CHAP. VII.

# fine Laws The Recapitulation.

The Aving thus run over some of the principal Cases that attend or follow Fevers; I shall take Leave of the Subject, first recapitulating what I have advanced.

I have endeavour'd to make it plain, that Fevers are generally the mediate Product of some depray'd State of Blood, put in a Hurry from forme external Accident of the Air: That the Pores are very alterable in their Diameters, and can be changed into any Compass, in Proportion to this Impulse of the Air and therefore they can either pass a large Quantity of the Perspirabile, or can retain more of it than they should. In the latter Case, Fevers are common Artendants, as Santtorius, Apb. 11. fed. 1. makes it plain, faying, Si ex Staticis deprehenditur impeditam esse Perspirationem, Diebus Sequentibus vel succedet plenior Perspiratio vel aliqua Evacuatio sensibilis vel Cachexia Vestigium vel FEBRIS, The Blood, thus disturb'd, produces the Fever, and all the Symptoms along with it, which are Index's of the particular State of Blood then reigning. But 1 could never observe two Persons in Fevers held in the fame Manner, altho' Epidemical Fevers were then on Foot: For altho' the Air may be so unwholfome as to affect many at the fame Seafon, especially unwary or tender Persons; yet all these N 2 never

never are seized but with much Difference from each other; one having a very high and ftrong Pulse; another a very low one; one with Inflammations, another with Pains, a third with Vemitings, and a fourth and fifth with some different Symptoms: So that the Fevers some Learned Perfons have obtruded upon us, as the same, in Every Individual, in fuch and fuch Years, can fignifie no more than as a Direction to us, how fuch Fevers (if any fuch happen) should be manag'd. Indeed, if Persons under such a Habit only are seized, and with equal Strengths, we may expect the fame Methods will ferve: But having had Hundreds under my Care, I never yet found this hold true. However, I know no Fever, from a Diary to a Pestis, which do's not only admit of, but even require proper Evacuations to unload the Vessels, or Prima via, of Part of the offending Matter; moreespecially if there be a Tendency to a Crisis.

The Species of Evacuations is determinable from the State of Blood denoted by the Symptoms; but the Quantity, from the Strengths of the Patient, For it seldom happens that a real Absumption of Spirits is the Cause of the weak Pulse in the Beginning of a Fever, but rather a Fixation of them; and consequently Evacuations are always required. Hence then, since the Blood or Humours offend in Quantity mostly. Evacuations are now proper; and especially, toe must begin very early with them, in Malignant

Cases, or Post est Occasio calva.

<sup>1.</sup> Where-ever the Heat is great, and the Pulse strong; or where the Heat is not considerable. So the Pulse appear oppressed, and the Strengths of the Patient have not been weaken'd by any preceding Accidents; Glysters, Bleeding, Cupping, Leeches, Die luents, Papaverines, and sometimes Acids, are necelfary. If Inflammatory Diforders, or violent Pains

afflict your Patients (whether the Pulse be strong, or even if weak, so it be only eclips'd) Bleeding is necessary to clog the rapid Morion of the Blood; which, by pushing on so violently, dashes against the Vessels, and Stops itself. Bleeding also is necessary in Plethorick Persons, to take off the burdensome Load. In Hamorrhages, if the Blood-Vellels are overcharg'd, Bleeding often relieves fuddenly: But I have seen the dismal Effects of it in Perechial Fevers, with a weak Pulse; where the Lancet is often too ready for the pidling Reward. Phrenzies require Bleeding, and can hardly be cur'd without it, because they are Inflammations; but as they generally happen at the Axun of the Fever, Caution must be used: Comatous ones do'nt require fo much to be drawn off, as the Furious Species. But how it comes to pass that Blisters are fo indifcreetly made use of in Furious Phrenzies, has always been to me fomewhat furprizing. In fuch Cases then you must avoid all Theriacal Medicines. In the Apparatus of the Small-Pox, fuch Medicines must be avoided as will raise any Commotion; and even the fame Caution holds good in any Stadium of the Small-Pox, supposing the Heat and Pulse to contra-indicate. In Youth, especially in Wine-Drinkers, when Fevers seize, Bleeding, and the same Regimen are generally requifite. Coma's and the Symptomatical Petechiæ often oblige us to take the same Measures. The Second Fever of the Small-Pox (which generally proceeds from an insufficient Extermination of the morbid Matter) is often so violent as to require Bleeding. Great Difficulties of Breathing (whether they are convulfive Afthma's, fuffocating Catarrhs, Peripneumonies, or Diseases congenial to these,) in such a State, necessarily require Bleeding, with a plentiful Hand: Nay, in Ardent Fevers, tho' the

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Pulse shou'd appear small, (if oppress'd,) it is to be ventur'd on.

2. Where the Heat is inconsiderable, and the Pulse weak, tho' quick : After Evacuations, suitable to the reigning Symptoms, are made use of; the gentler Alexipharmacks are proper; fuch as the Testaceous Pouders (Crabs-Eyes, Pearl, Coral, Oyster-shell, Crabs-Claws, &c.) They are proper, where some critical Eruption has been impeded; in the Fevers of Old Men; in Mistakes from Evacuations, to wit, where too much is drawn off; where there is any Faintness or Sickness at the Stomach, or any Pain at the Pit of it; or where the Matter (that, by the Efforts of a Crisis, has appear'd externally) retreats into the Mass again; in a Difficulty of Breathing, from such a State, (that is, with a weak Pulse, and Coolness in the Habit;) in an Epilepsy, in Eruptives; and in a Salivation suppress'd. If any of the Viscera are already feiz'd (or are in Danger of it;) as the Head, with Deliria, Coma's, &c. or the Lungs, with Coughs, Asthma's, &c. then, in this State, Blisters are to be apply'd. (Vid. p. 91, 94, 95, 107, 108, 119, 128, 129, 150, 151, 154, 156, 159, 160, 162, 173, 174, 182.) Nay, Blisters are often requir'd in the Beginning, where the Pulse is weak, or the Head is loaden with a Quantity of Serous Blood, which brings on Coma's, &c. with a Slow Fever; or for the Prevention of Comatous Deliria, in Epidemical Slow Fevers, which terminate thus; but very very often at the State, for the Prevention of Coma's and Comatous Deliria.

3. Where the Heat is hardly, if at all, perceptive ble, the Pulse is very small, and where the Extreminies are cold; in such a State, (after suitable Evacuations,

cuations, if they are requir'd,) we must have recourse to the warmer Alexipharmacks, such as Rad. Serpentar. virg. Volatile Spirits ( of Hartshorn, Salt Armoniack,) and the spiritous Cordials; as also to Blisters and invigorating Suppedanea. And towards the 'Axun', Wine may be allowed. In Pestilential Cases, where the Pustules of the Small-Pox, Buboes, or Spots retreat into the Mass again, these are necessary. In Difficulties of Breathing. in such a State, (viz. where there's a weak Pulse, and an imperceptible Heat,) they are indicated; as also in Epilepsies, a suppress'd Salivation, and all. Symptoms in fuch a Condition.

- 4. Where there are any Remissions or Intermissions, the Bark of Peru is the most remarkable Remedy; but in any Eruptive Fevers, 'tis useless or dangerous before a total Eruption. As to other Febrifuges, 'tis remark'd that they are to be given before the Fits; and if they be of a volatile, Nature, then they must be given only an Hour before the Fit; if of a fix'd Species, you must give 'em two or three Hours before it; because they produce their Effects flowly.
- 5. At the State of the Fever, (that is, after the Augment is over, and the Fervor abated;) what is critical must be promoted, so long as it continues to be so; for, Quicquid in Principio bonum extiterit Perseverantia fit visitiosum, says Chesneau; and Sydenbam, in other Words, copies him, in faying, Sudores utiles, d'un Urina costa est, diutius quam cocta est, non suns promovendi. ever, you must understand the Words diutius quam costa est, in such a Sense as I have explain'd above in the Crises.) A Salivation in any Fever, is always unexceptionably critical (without waiting for a concocted Urine, tho' it precedes,) unless it be NA too

too long continued; it is promoted by Liquors given plentifully, and warm'd. Here then the warmer Alexipharmacks are indicated, and a gentle Promotion of what is critical by proper Specificks. So that Sudorificks are usually ventur'd on at the State of the Fever, when Nature inclines that way, and the Urine is well concocted: But in the Beginning of ordinary Fevers, especially the Inflammatory ones, they inflame more, and occasion Pleurisies, Head-achs, Coma's, Spots, Bloody Urine, and whatever Symptoms depend on a Commotion of the Mass. Tis true, in a neighouring Nation, in ordinary Fevers, they make freer with them, than we dare do; and the Pupils of fuch, in their Practices here, often (at their Beginning of Pra-Elice) commit great Mistakes; not considering that they agree with their ferous, but not with our sizy Blood: Yet, in some Malignant or Pestilential Cases, I have seen them answer from the very Commencement of a Fever; but then the Urine, at the first Seizure, was concocted, and they naturally dropt into 'em; and the Suppression of 'em brought on Symptoms of a fatal Consequence to fome, which were plain Indications for them: Alfo in the Pestis itself, no other Method, without Scandal, is allowed to be followed; tho' Authors' differ in the Manner and Continuance of them? But our Countryman Sydenham, in copying some Antients, acts most prudently in this Affair, in continuing them for Four and twenty Hours, without Interruption, or Change of the Sheets or Linnen; for, Tolli, quod Putridum, non alterari, postulat, is meant of such a State of Fever, where the Contents are so deprav'd, as to be preternatural in their whole Substance, as the Antients term'd it.

Hippocrates's Remark is, That devevoles eodem die exturbandi, Aphor. 22, & 24. Sett. 1. and Aphor. 10. Sett. 4. (hi deva, aubnused paguaxdien.) We must

must then enquire what this Turgescence implies; and we shall be enabled to judge when to evacuate. In general, Humours are said degate (turgere) when they range in the Mass; and the they six nowhere, yet they create an Uneasiness, and seem to invite us to expell them. If we add, they turgesce, when they are in great Plenty; when they are concoded; and when they are Pestilential; we may, in all these Cases, conclude, that Evacuation is somewhere required. Evacuations then must be made, when indicated; the Neglect of which, in due Season, is justly reputed to be the Fault of such who are first call'd.

plain Abatement of the Symptoms, and the Urine separates; you may use proper Evacuations, whether Purgatives or Bleeding. Care must be taken, that what is critically expell'd, be not driven back again into the Mass: For now it is that critical Eruptions or Evacuations are to be encouraged. The Times in which Crises are perform'd, are very different in the several Species of Fevers; in which the Eruptive Sort is, by much, the most active.

J. If a Nausea, or a Vomiting, or Loads at the Stomach be complained of; an Emetick is to be given; or if they are such Persons as cannot bear a Vomit, then a gentle Lenient supplies, which you may repeat at a little Distance, if required by the Continuance of the Load: For thus the nestling Humours, lodg'd in these Passages (which make way for Diarrhæa's) are thrown off. Harris, in Morb. Infant. p. 52. observes, That Sir W---m Boise, of Canterbury, took off Coma's in Worm-Fevers, by Mercurials. I shall not say how much this depended upon the Saburra, as the Fomes

of this Fever, and consequently required Evacuations proper to exterminate it, which kill the Worms. And besides, whoever takes away the Canse of any Disorder, which is not fixt, necessarily takes away the Symptom. Glysters evacuate the Faces, if too plentiful, as well as the Saburra of the Colon; and may (if Purgative) supply the Neglect of Lenients in weaker Constitutions.

Purgatives (by which I would, in Fevers, be understood to speak of Lenients) are necessary, where there is a Turgency in the Humours. In a Saburra of the Intestines; before a Fever; in an Astrictio alvi; in a Comatous Phrenzy; after Signs of Concoction; and, according to F. Piens, in Colione qualicunq; even in the Beginning and Augment; in the weakest Persons, after Concoction, in Malignant Cases; and after the 7th or 9th Day in Childbed-Women.

8. In the Pestis, Diaphoreticks are only to be consided in; as also in Pestilential Cases; and even in Malignant Fevers, they are the only Relief: For in the Pestis, Nature is oppress'd and sinking: They are indeed to be specificated, so as that in the Ardent Species, six'd Antimonials, and even Salso-Acids are conducive; but in the Hestical Sort, the more volatile ones are to be used.

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Pulse must neither exceed the natural, nor languish below that Standard; whether before the Crisis, in the Time of it, or after it is over. So that the Degrees of the Strengths of the Pulse, and the Warmth, indicate the various Alteratives; which, in great Heats and strong Pulses, require the Coollers; (in which some Caution is necessary, so as Acids are dangerous in Instammatory Cases, because they

# A Critical Essay on Fewers. 187 they coagulate:) But in the contrary State, the warmer Medicines.

- 10. Opiates are naturally required in all violent Evacuations; in any notable Commotion of the Spirits; in any violent Pains; in Epilephes; in Phrenzies; where the Spirits, before any critical Eruption, are too rampant; in Anxietudes in ardent Malignant Cases: But if it be possible, its adviseable to forbear 'em before a Criss.
- noble Viscus being seiz'd: When the Brain is in Danger, (as will appear by the Signs of its Plenitude;) or the Lungs are threatned, (our Breath being some way affected;) and so of the rest. As to Revulsions, it is not the the Business of this Paragraph to mention their Methods, nor the various Restitudes observable in 'em.
- be evacuated: And also, the Evacuation is diversify'd by the Nature of the Humour offending. Hence the Particles offending in the Puerperal Rever are to be evacuated by Sweats, and the Lochia; as are those in the Lasteal Fever; as these in the Pleuritick Fever in Puerperals; the Februs alba, by the Semen or Menses; so that if the Head is most affected, then Hamorrhages terminate such Fevers; if the Uterus, the Menses evacuate emplaied; if the Blood, Sweats carry those best off.
- 13. In Agonifical Crifes, we must neither promote nor curb Evacuations, but suffer 'em to go forward, according to Nature's Bent; which, whenever they become very troublesome, are no farther, then, term'd Crifes, but Symptoms, and are to be remedied by proper Methods.

14. Every

14. Every Symptom is to be relieved by its proper Indicata, over-and-above what is remark'd in the above-nam'd Paragraphs of this Corollary: And as Fevers are so collective a Diforder, that to offer at fumming up all the Symptoms producible by it, and their Remedies, would be to compile a whole System of the Medical Art: Therefore I shall only sketch out proper Remedies for some Symptoms commonly occurring in each Species, to illustrate the Method; and shall leave the Reader to confult, 'till a more proper Season.

# A. the soft to of the Laboratory of the soft of the soft of the control of the co

Danger, (as well appear by the Sans of its Flori-

#### Paragraph to mention their Methods, not the year-A SYLLABUS of the

#### PRESCRIPTIONS. S. arion is dicer-

O render this little Treatise as Useful as I can. I have here subjoin'd such Remedies as I have found proper in Fevers: And so many Variations of 'em, as that, at one View, most of what is useful may be ready for Prescription; which I have done, in order to illustrate what I have advanc'd. I have suppos'd the Patient at the Age of Five and Twenty, and I leave the Recipe's to be adapted to each Age, as the Prescriber shall judge proper. 13. In Agan Beat Oviler, we mult neither pro-

## forward, according to Valent Fevers. Which when-

Injiciatur Enema ex Laste Saccharato; tum extrabatur Sanguis quamprimum ad 3x. e Brachio ; repetatur, si requiratur, Re Aq. Borag. Buglofs. 14, Every

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a ziv. Meliss. zij Lact. Alexit. zj. Cinnam. b. ziij. Sp. Nitri d. q. s. ad Acorem gratum, Syr. Violar. zj. m f. Julapium cardiacum rubrum, cujus capiant Cochl. vj. in Languoribus. Vel,

- R. Aq. Portulac. zvj. Paralys. zij. Syr. Diamoron zβ. Sal. Prunell. Эj. m. f. Julapium, sumendum pro Lubitu.
- R. Aq. frigid. Saxon. Zx. Papav Rhaad. Ziij. Syn. Limon. 3\s. m f. Fulap. e quo capiant Cochl. aliquot in Languoribus.
- R. Conf. Borag. Bugloss à 3j. Violar. 3is. Tartar. vitriolat. Dij. Syr. Limon. qs m. f. Electuarium cujus sumant Magnitudinem Castanea ter de die superbibendo Cochl. aliquot Julapij cujusvis. Vel.
- Re Conserv. Lujul. Ziij. Cynosbat. 3\beta Limon. tabulat. Zj. Syr. e Rub. Idao qs. m. f. Elettuarium, Jumant ut prius. Vel,
- R Conditur. Berber. Zij. Miv. Cydon, Uvar. Corinthiac, à Zj. Syr. Diamor. qs. m. f. Electuarium, Capiant. ut prius.
- Ro Tinctur. Rofar. toij. bibant ex ea ad libitum.
- Re Decolt. Coccin. thij fit pro Potu communi.
- Re Amygd. d. excortio. no. x. 4. Sem. frigid. maj. à 3j. Consus. In mortario, eis sensim affund. Aq. Hord. thij, Colatur. add. Sal. prunell 3\beta. Sacch. perlat. qs. m. f. Emulsio pro Lubitu bibenda.

Bibant Cerevisiam tenuem; Serum Canarinum tenu-Simum, Claretum Coberi; vel Serum e Pomis;

Tea ex Limon. , Hydrogala.

athid " ma'in is 33 m.f. Emplofer folearie

Pibant

Diete sit Jusculum avenaceum, Gelatine, Panatella, Flos Lactis Orizatus, Limonatus vel Imperialis; Poma tosta; &c.

Under this Head Symptoms are to be treated differently. So,

## LASSITUDE.

Under this Head, it is called Lassitudo Plegmo-

Extrahatur Sanguis ad Zxij. e Brachio, & reiteretur pro Re neta, In aliis, procedatur ut supra.

## olat. 3 t. 8pr. Limoa. 93 vs. f. Elellumium curps.

Extrahatur Sanguis e Brachio ad zxij.; repetatur, fi opus sit. Quoad Catera, procedatur ut suprà, quia Symptoma est, tantummodò, lato Sensu.

#### HEAD ACH: My of the mil

Re OL Rofer. Acet. ejust. à qs. Sacch. Saturn. 3. m.

R. Sem. Papav. alb. 3\(\beta\). Flor. Rosar. (a Destillatione resid.) in Acet. Sambuc. (cum Vitello unius Ovi agitat.) qs. m. super Ignem in Epithema, Frontiadmoundum. & sepins renovandum.

Prius pramissis vena Sectione, Chologogo miti, vel Enemate pro Baigentia, Acc., ut in Genera.

# Hord ( Satsmanh ) SAI MING To Such.

Extrahatur Sanguie e Brachio & Pedibus pro Virium Ratione (prius Enema ex Lalle Saccharato inficiatur;) dein Columb. per medium sed. Soleis admoveantur; vel R. Emp de Mucilagin. qs. Opij, Ol. Lilior. malaxat. 33. m.f. Emplastr. solearia.

Bibant

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Bibant Copiest ex Sal. Prunell. in Ag. Horder vel Ptifana: tandem R. Aq. Papav. Rhed. 31j. Laduc, Para-Jef. siv. Sal Nitri purif. 9j. Land. opiet. gr. iif. Syr. Papav. Rhead. 38. m. Capiant. cochleatin.

Foveantur Hypochondrio Decotto Althue in Latte: Loco Columbor. diffectar. Soleis admovement Theriac. Androm.

CONVULSIONS. In order to lay the Hurry of the Spirits, and recruit them, as being harrafs'd,

Vena Secetur, ad 3x extrabatur Sanguis, Cucurbitola varies Partibus admoveantur.

Enemata ex Decost. Emollient. injiciantur cum Oleo Succini: SCHURY.

R Ag. Rut. Paleg. a Zij. Ladis alex. Ziv. Park. Cay Bez. min grave Laud. lig. 38. Syr. de Mecon. 38. Sal. vol. oleof. gut. vj. m. f. Julapium Cochleasim Sumendum.

#### COMA'S, LETHARGIES.

Extrabatur (& repetatur in alis Venis) Sanguinis Quantitas, ad 3x., e Jugulari; Cucurbitule Sca-Rheo ad 51. in A Cichor stutuspilego siluq

R. Aq. Rut. 3iv. Sp. Vitriol. Gut. x. m. f. Haustus, Sapius repetatur. Etmuller. p. 427. Acetum Naribus admoveatur, in Comste Sebrili. Abstineant a Letto per Horas aliquot Diei.

#### R. Rad. ( few Liggoriante W 3) f. p. Divid. in

Extractione Sanguinis premissa ad 3x. vel xx; Ene-matibus dietim injectis (ex Decocto communi;) Pedes COLICKS

Pedes Decocto (e Fol. Hyoscyam. Sem. Papav. alb. in Latte vaccino) laventur.

Emulsiones copiose bibant cum Semine Papav. alb.

Epithema Fronti admoveatur ex Vitell, Ovor. no. ij.
Ol. Rosar. 3\beta, acet. Rosar. 3\ij. Placent. Rosac. qs.
f. Frontale.

#### VOMITING.

Premissa Sectione Venæ ad zx. Eluatur Ventriculus Aqua Pulli vel Hordei : Saburra eliminata, Rc Succ. Limon. zs. Sal. Absinth. Эј. m. Capiat sæpius ; vel Rc Aq. Menth. zij. Succ. Cydon. zj. Sp. Vitriol. Gut. vj. Syr. de Mecon. zs. m. Capiant cochleatim. Bibant sæpius Tea e Succo Limonum fact.

#### ISCHURY.

Ballonius Annot. 1. in C. 37. L. 2. & Diuretica non probat; quoad Emerica qua laudat, non probo; at V. Sang. Sustuli.-Derivandum-porius per alvum.

#### DIARRHEA, DYSENTERY.

Tundatur vena ad 3x. & si opus sit, iterum celebretur. Bibant Tindur. Rosur. vel Decolt. album. Rheo ad 3j. in Aq. Cichor. 3iv. insus. & Syr. e Ros. salutiv. Edulcorat. Saburra elutrietur; & pro Re nata Potio reiteretur.

gr. iv. Syr. de Mecon. 9s. m. J. Bol. no. if. Capt. j. Hora quaque 6ta. Seu,

R. Rad. ( Seu Lign.) Cayennens 3j. f. p. Divid. in Chart. no. ij. pro Vicibus ij. Cap. in Aq. Cinnam. b. Zij. ad Distantiam 6 Horarum. Non fallit.

Pedes

COLICKS,

Success:

### Colicks, ILIACK Passion.

Pramista Sectione Vene: Injiciatur Enema (ex Flor. Sambuc. Chamomill. Melilot.) cum Laste paratum. dein R. Fol. Senn. Alex. 3js. Sal. Tartar. gr. vj. Infundantur in Aq. font. Colatur. 3jv. add. Mann. Calabrin. 3s. Syr. e Ros. Solutiv. 3j. Crem. Tartar. 3j. m. f. Potio tepide haurienda; operatione perasta, R. Aq. Menth. Flor. Chamom. ā 3jj. Syr. de Mecon. 3vj. Sal. prunell. 9j. m. f. Haustus, ad dolorem pacandum.

#### NAUSEA, ANOREXIA.

Pramiss Vena Sectione, & Emerico leni, ex Pulv. Rad. Mypocacuan. 3\beta. in Aq. Cardui; dein Re Cons. Rosar. vitriolat. q. s. Capt. parum subinde in Nauseà.

R. Sp. Vitriol. d. 3ij. Capt. Gut. vj. in Liquore ali-

R. Sp. Sal. Armon. acid. 3j. Capt. gut. x. In Aq. Hord.

# THIRST.

Sedatur Vino Lymphato affatim Sumpto; Clareto Coberi, &c. ut prius.

## -Hongian Dyspnea.

M. Sang.; Sp. Sulphur. gut. x. In quocunque Vehi-

#### PAINS (RHEUMATICK.)

M. Sang. (repetità, modo Pulsus fortis, Ardor & Dolores urgeant.) ad zxij. vel Cucurbitulis; Enematibus Emollientibus (ex Decosto Communi, ex Laste Saccharato, &c.) Emulsionibus uti prius, Epithematibus (si requirantur) ex Pane cum Laste costo & Croco, seu ex Lenticulà palustri Flor. Chamom. Laste & Farinà Hordei simul costis & admotis, seu Aq. Plantag. Rosar, Aceto Rosar. &c. Diluantur Salia Aqueis, (Hordeaceis, avenaceis, &c.) Tandem, a Statu, dentur Diaphoretica ut Turgentes Humores expellantur. Abstineant a Lesto per aliquot Diei Horas, uti Sydenham (a Nic. Pisone L. 3. C. 3. de Anginà) consulit.

#### WORM-FEVERS.

Pramiss Venze Sectione & Enemate. R. Corallin. pulv. 3\beta. Cons. Lujul. 3j. Sp. Vitriol. gut. iv. m. f. Bolus, Capiant; tum Hora una vel altera elapsa; Detur Insusum Senna Ziij. cum Syr. e Flor. Persicor. Zi\beta. M. Admoveatur Emp. vermisug. Batean. Regioni Ventriculi.

#### PUERPERAL FEVERS.

V. Secetur in Brachio, tum in Talo; tum R Aq. Ulmar. Puleg. ā ziv. Aq. Hirund. cum Castor. zij. Gelatin. C. C. acid. zs. Acet. Theriacal zij. m. f. Diaphoreticum. Etmullerus.

INFLAMMATIONS, (Pleurisies, Peripneumonies, & c.)

Vena Sectione repetià sanantur; tum Emulsionibus suprà memoratis; Sale Prunella ad 3\beta. in singulis lis Haustibus: Cave tamen ab Acidis, ne Coagulum inde augeatur, & sanguinis Circuitui in Arteriis evanescentibus Obex ponatur; Diata sit tenuissima. Hinc in Colo Inflammato, Extrahatur Sanguis ad Zxij, e. Brachio; & reiteretur, si ab Inflammatione indicetur; Item Hirudines Ano admoveantur; Item injiciatur Enema (ex Brodio Vervec, toj. Vitell. Ov. no. ij. Sacch. Crystal. Zj. m.) Potus sit Decost. Hord. cum Syr. Dialth. Re Flor. Chamom. Sambuc. Melilot. à p iij. Farin. Lupin. Zij. Caricar. ping. no. vj. Incis. & Contus. Coq. In Lacte ad Consistentiam Cataplasmatis, admoveatur.

Unde in omni Instammatione, priusquam Radices egerit, seca Venam sæpius, refrigera Sanguinem, Revelle; discuti & emolli. Etiam in Puerperis, Venæ Sectio celebretur, parca tamen Manu.

#### SYMPTOMATICAL SWEATS.

V. S. pramisa pro sudorum Modulo; R. Aq. Portulac. ziv. Lattuc. ziij. Sal. Prunell. Jj. Syr. Limon. zs. Tind. antiphthisic. Garmann. gut, xij. M.; Ad alium Ledi Locum se moveant; A Ledo eximantur; Stragula amoveantur aliqua; Fenestra aperiantur; Sudor non abstergendus est.

#### HAMORRHAGES.

V. S. pramissa, & repetita pro Exigentia; Bibant Tincturam Rosarum. R. Alumin. crud. 3j. G. Lacc. Pictorum 3is. m. f. Pulvis insufflandus; seu Stypticum Tasburgense intrudatur.

## FLUXES (of any Sort.)

Settio Vena, vel Cucurbitula premittantur. Ratione Febris Speciei, Refrigerantia sapius memorata O 2 exbibeantur.

exhibeantur. Et demum Ratione Meates aperti, Cohibentia propria administrentur; & pro Medici Lubitu commisceantur.

#### INTHE

#### HECTICAL SPECIES.

- Præmissa Catharsi, ex Fol. Senn. cum Syrup Rosaceo folutivo & Cremore Tartari; Vel Emetico; Vel alio quovis Evacuatorio Indicato.
- Re Bezoar. min. 3j. detur. Japius in Jusculo.
- Re Bezoard. min. Hij. Campbor. gr. xij. cum. Aq. Card. bened.
- R Bezoard. min. Jj. Sal. Prunell. 33. Campbor. gr. vj. m.
- Re Marg. ppt. 3j. Oc. Cancror. 3\beta. Sacch. Grystall. ad Pondus utriusq; m. f. Pulv. divid. in Chartul. no. iv. Capiant. j. Hora quaq; 3tia, 4ta, 5ta. In Julapij cujusvis Cochl. vj.
- Pulv. e Chel. C. 3j. Sacch. alb. 3\beta. m. f. Pulvis dividendus in Chart. no ij.
- R. Pulv. e Chel. C. zj. Theriac. Androm. zij. Conf. Alcherm. incomplet. Dj. Syr. e Cort. Aurant. q. s. m. f. Bol. no. ij.
- R. Camphor. gr. iv. Pulv. e Conf. de Hyacynth. 3j. Diascord. Fracastor. S. Melle 3s. Syr. Caryoph. g. s. m. f. Bol. R. Pulv. Rad. Serp. Virg. 3j. Ther. And 3j. m. f. Bol.

- Re Sal. Vol. C. C. gr. vj. Conf. flor. Anth. 33. Conf. Alcherm. f. m. 9j. Syr. Croc. q. f. m. f. Bol.
- R. Pul. Goan. Lap. Contrayero. 3 9j. Theriac. And. 9j. Syr. Caryoph. m. f. Bol.
- Re Aq. Last. Alex. Ziv. Meliss. Ziij. Menth. Zj. Epidem Zj. Marg. ppt. Zj Sacch. alb. q. s. m. f. Julap. e quo Capiant. Cochl. vj. in Languoribus (Phialà priùs agitatà.)
- R. Aq. Scord. Ziij. Naph, Zij Cinnam. h. Ziß. Mirab. Zß. Marg. ppt. Jij. Sacch. Crystall. q. s. m. f. Julap.
- Re Aq. Flor. Tiliæ ziv. Protheriacal. zj. Ceraf. n. zjß. Epidem. zj. Sacch. alb. q. s. m.
- R. Aq. Borrag. 3j. Bugloss. 3ij. Epid. 3β. Sp. C.C. 9j. Syr. Caryoph. 3iij. m. f. Haustus.
- R. Sp. Fuligin. Jij. In Vehiculo detur.
- Re Pulv. Cantharid. (demptis Alis & Pedibus.) J. Ferment. acerrim. 3j. m. f. Emp. Vesicatorium largum pro Nucha. Vel,
- Admoveantur Emp. vesicator. Nuchæ, & Carpis; vel etiam Brachiis Internis, vel Suris, &c.
- Admoveantur Cataplasm. Solear. Batean. Soleis.
- Si Animus tibi sit Ulcuscula a Vesicatorio excitata aperta servare; admoveatur Emp. Vesicatorium perpetuum, quod sic communiter faciendum curavi. Infunde Cantharid. pulv. Jj. (In petia ligat.) In Aq. Bullient. 3x. tum Injiciatur Basilic.

ad zij. Ponantur omnia super Ignem lentissimum, ut omnis Aqua sensim Evaporetur; Sicque Sal Cantharidum Unguentum Virtute sua Imprægnabit, quod debilius vel fortius (additione vel Substractione unguenti) sieri potest; Pro Usu servetur; boc enim, Emp. Meliloto superinductum, Serum in Quantitate sat larga exprimet, nec Fraus facile detegetur. In Filiola mea Dysuriam sat molestam excitabat.

# A LASSITUDE: In this Case 'tis Lassitudo Ulcerosa.

Præmissa Catharsi ex Sennæ foliis; fac ut se disponant ad Madorem, Insuso e Foliis Tea (Bohe) Saccharato.

## O. A. A. A. VERTIGO.

Primis Viis purgatis; Capiant Misturam (ex Sp. Lavend. 3\beta. Tinct. Castor. \(\partial\_j\). Sal, vol. oleos \(\frac{7}{3}ij\). in Vehiculo appropriato.) ad gut. \(\frac{x}{2}\).

#### marvandy qual HEAD-ACH.

Proritetur Alvus, Aquà Salità; Applicetur Vesicatorium Nucha. R. Sp. C. C. Zj. Aq. Hysteric. Ziij. m. f. Epithema (Vel Sp. Rna. Hung.) R. Pulv. de Gutt. Zj. capt. in Infuso Thea.

#### DELIRIA.

elicatorio excituta

Quia in Statu vel paulo ante eum Evenire solent Deliria, ideo prasupponitur Evacuationes debitè pramissas suisse: Nil ergo agendum restat, nisi ut admoveantur Emplastra vesicatoria, pauciora vel plura,

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plura, pro Spirituum Vacillationis & venegorius Modulo: Porrò Emplastra vel Cataplasmata Solearia, (ex Emplast. Cephalic. cum Euphorb. & Ol. Mac.; vel Sem. Sinap. pulv. Porrò Contus.; seu Allio cum Oxymel. Scillit. seu Halece falito) vel similia, admovenda sunt. Et,

- R. Cinnab. Antim. 3 j. Bezoard. Miner. 3 ß. Campb. gr iv. Laud. opiat. gr. ij. Syr. Croc. q. f. M. f. Bol. no. ii. Capiant. j. Hora quaque 7ma, vel sapius si requiratur, vel prosit. Vel,
- Re Aq. Paralys. 3iij. Epilept. Lang. 3\beta. Sp. C. C. gut. xx Laud. liq. gut. xxx. Syr. de Mecon. 3iv. m. pro duabus Dosibus.
- R. Pulo. Rad. Serpent. Virg. 3\beta. (\(\partial\)ij.) Sacch. Saturn. gr. v. Theriae. Androm. 3\beta. Syr. de Mecon. q. \(\int \). m. \(\int \). Bol. no. ij. Capiant. i. Hora quaque 5ta, 6ta, &c. Superbibendo Cochl. iij. Julap. Seq.
- R. Aq, Meliff. Flor. Tilia à ziv. Hysteric. z ij. Sp.C.C. 3B. Syr. Papav. Rhaad. z j. m f. Julap.

#### CONVULSIONS.

- Pramissis Catharsi, Enematibus, vel Emeticis: Admoveantur Emp. vesicatorium unum vel plura: hie tamen monendi sunt Medici ne nimium Evacuent: at Analeptica, Cephalica, & Opiata sunt Medicamenta, super qua Cardo Medela vertit. Hinc,
- Re Cinnab. Antim. gr. vj. Sal. vol. C. C. gr. j. Cran. human. pulv. 3 B. Laud. opiat, g. j. Syr. Caryoph-q. f. m.f. Bolus, quaque Hora, 4ta, 5ta, vel 6ta, repetendus cum Cochl. vj. Julap. Jeq.

  O 4 Re Aq.

- R. Aq. Flor. Tilia ziv., Puleg. Rut. Ceras. n. a. zijj. Tintt. Castor. Dj. Castor. (in Petia ligat. Et suspens.) gr. vj. Sacch. alb. q. s. m. f. Julap.
- Re Theriac. Androm. (cum Ol. Succin. malaxat.) 4. s. m f. Cataplasmata Solearia.
- Si Subsultus Tendinum Ægros divexent, sumantur gr. iij vel iv, Ent. Vener. in Cons. Flor. Anth. cum Vehiculo specifico sæpius in die.

#### COMA'S, LETHARGIES, &c.

- Admoveantur Emplast. Vesicator. Nucha & Brachis internis.
- Re Piper. Euphorb. Calam. aromat Pyreth a 3j. Ceræ 3j. Ol Succin q f. m f Linimentum pro Cervice ungendà.
  - Bibant Copiose Teq ex Satureia factum.
- Lotiones Pedum fiant cum Decocto vel potius Infuso ex Herb. & Rad aromaticis (viz. Angelic. Calam. arom. Majoran. Lavend. &c.)
- Suffiantur Nares Sulphuris Fumo, seu Sp. Sal Armon. cum Calce fact. Capt. gut. x. vel xv. Sp. C. C in Vehiculo appropriato.
- Sique Symptomata hac sint periodics, misceatur Cortex Peruv. cum Tea, ex Fol. Bobea.

### WATCHINGS.

Hie Obiter moneo, ne medici Virgiliis Criticis, seu ab Inquietudine Critica suscitatis, Auxilium prabere pratexant. Si Spiritus Erigere Conemur, Vigilias abigemus, que boc in Casu plane vacillantes Vires arguunt: & uti Senum Vigilia Ambratis & Cardiacis tolluntur, ita ubi adsint Spirituum Debilitas & Paucitas, & inde Vigilia, iisdem plane Remediis, eos Supplere debemus ; Quibus sic restitutis, Symptomata exinde generata necessario truncantur Sit igitur Diæta Analeptica ex Pullis, In Gelatinam coltis, ex Julapio Vita cum Similibus, cum Dieta pauxillum vinosa.

#### COLICKS, ILIACK PASSION.

Elutrientur Humores Senna in Aquis Cordialibus Infusa (modo necessario Catharticum requiratur;) quod manifestant Plenitudo quadam in Hypochondriis & Tensio a Flatibus; dein Rob. e. Bacc. Junip & Laur. cum Antim. Diaphoret: cum & Laudano Rem perficient; Item quandoq; sumant Sp. Junip 3j. Aq. Menth. 3ij. Vitell. Ovi. no. j. Sacch. q. f. m. f. Haustus Carminations, seu Eleo-Sacchara Cinnamomi, Carvi & Similia. Si Sedes ipfius sit in Partibus Inferioribus, Enemata cum Successu injiciuntur, uti sepius expertus sum.

#### THIRST.

Hoc in Statu quam optime Potu ex Thea, Salvia in Aqua Infusa, Sero Canarino, Decocto Santali cum Cort. Aurantiorum Saccharato Sedatur; Os, Mucagine alba obductum, Eluatur Acrimoniam Temperantibus, & Abstergentibus, (viz.)

full ages Torzi Medile. Fracile Englice audit. O was

Horrors,

## Horrors, Rigors,

Si graves sint periculumq; minentur, Vino Calid.
auserantur; & Horrorem, in Puerpera per Hora Dimidium, & quod excurrit, durantem, Sp.
C. C. ad H. & amplius, partitis Vicibus, non folum sustait: At porro Sudores copiosos per Horas sex stuentes placide, & Symptomata Leves si sint, sunt Malignitatis Indices; nil tamen Remedii postulant, praterquam qua Febris Specie exiguntur.

#### A Dystne A.

Epispasticis, Alexipharmacis generosioribus, ut in Genere, alleviatur.

#### VERMINOUS FEVERS.

Re Pulv. Ent. Vener. 33. Conf. Absintb. rom 3ij.
Syr. e Cicbor. cum Rheo. q. f. m. f. Bol. No. iv.
capiant i. Hora quaq: oltava cum Cochl. vj. Vini
Hermetici, (viz. Vini, in quo Mercurius vivus
infunditur.)

R. Æthiop. Mineral. 3j. Sacch. alb. 3j. m. f. Pulv. divid. in Chart. No. iij. capiant j. quaq, Hora, ollava in Cochl. iij. Vin. rubri.

R Pracipitat. Vener. gr. v. Etmuller. p. 626.

R. Pulo. Auxei. 38.

Et Lucas Tozzi Medic. Practic. Part. 2. ait, Omnis Timor abest. si des Vermibus inimica, quia Enedis Vermibus, desinit Febris, &c.

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Fel Bubulum cum Aloë admoveatur in Forma Unguenti Umbilico, super Vesicam extendatur.

#### PUERPERAL FEVERS.

Etmullerus sic prascribit: Re Antimon. Diaphor Cinnab. Antim. a 3j. Sal. vol. Sang. human. 38 Sal. Volat. Succin, gr. vj. Myrrb. gr. iv. m.f. Pulv. No. ij. Capiant in Aq. Ulmaria cum Syrupi pauxillo.

R. Aq. Puleg. Rut. a. Ziijß. Epilept. Lang. Zj. Caftor.
(in Nodulo suspens.) B. Tinet. Croc. ZB. Sacch.
Crystall. alb. q. s. m. f. Julap. ad Libitum pitisandum. Etiam omnia, Febris Speciei, Remedia contrarientur, uti suprà sat copiose indigitavimus.

#### SYMPTOMATICAL SWEATS.

Quacunq; Spiritus labascentes exhilarant, eoso; vacillantes resarciunt, Sudores istos reprimunt, Es Crisin promovent: Quia Sudores bi ex symptomaticis, prosicui & utiles evadunt; unde consule Prascripta pramemorata.

#### HEMORRHAGES.

Hoc in Statu quoties vidimus Homunculos miserrime els ades missos prapostero Lancetta Usu? Evavelwas serio consideranda, nam si Sanguinem Cardiacorum generosiorum Usu nimium evebamus, ejusq. Compagem solutam nimis reddamus, vehementius erumpet, si Incrassantia & Styptica exhibeantur, magis dietim Massa congulabitur, &
inepta siet qua Spiritus generet, Particulasq;
noxias

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noxias e Sinu suo expellat: Remedia ergo commiscenda sunt.

- Re Pulv. e Chel. Canc. C. zj. Vitriol. Mart. ad Albedin. Calcinat. gr. vj. Marg. ppt. Эj. G. Arab. Pulv. Эβ. Theriac. Androm. zjβ. Syr. Myrtin. q. f. m. Bol. No. iv. Capt. j. Horà quaq; quartà fuperbibendo Cochl. aliquot Julap. seq.
- Re Aq. Plantag. Rut. a ziij. Cinnam. h. zj. Epidem. zß. Acet. destillat. zj. Syr. Caryoph. zß. Diascord. Fracastor. zj. m. f. Julap.
- Turunda ex, Creta, Naso imrudantur, vel Pulv. Colcothar. in Nares (si ferre queant) insuffletur.

#### FLUXES.

THE RESERVE WAS A PROPERTY.

- Febris Alexipharmaca & Cardiaca postulat; & Fluxus Styptica, Glutinantia, ob Meatum apertum, requirunt; unde simul permista, Effettus suos sortientur.
- Talia funt Testacea, Margaritæ, Oc. Cancror. Sal. Absinth. Sp. C. C. Terra sigillata, Terra Lemnia, Sang. Dracon. Vitriolum Martis, Croc. Mart. Astring. & similia.

#### INFLAMMATIONS.

- Etmullerus, in Pleuritide a Lochiis suppressis hac habet:
- R. Aq. Puleg. Papav. Rhad. a 3j. Antim. Diaphoret. 9j. Sal. vol. armon. gr. vj. Sal. volat. Succin. gr. iij. Castor. gr. ij. Syr. Card. b. 3\square. M.

que des trasferences l'ancientates

SELECTION OF

Aperientia

Aperientia ergo mitia exhibeantur, ut Coagulum praoccupetur, Saltem ut genita Obstructio amoveatur; & Motus intestinus sedetur Anodynis, Tenuibus externè Discutientibus & Emollientibus, Circulatio Humorum, Sanguini rursum concilietur. Actions in Fider adhibe

#### ANOMALIA, seu Retrocessio Pustularum. Bubonum, &c.

R Antim. Diaphor. 3 S. Camph. gr. vj. Cinnab. Antim. 9β. Syr. Croc. q. f. m. f. Bolus quâg, Hora quartà reiterandus cum Julapio Perlato ad Cochl. aliquot. Vesicatoria admoveantur.

#### INTERMITTENT OF REMITTENT FEVERS.

Pramistis Evacuationibus propriis (à Specie Febris indicatis.) Sycientism, praintly Vene Sellione.

R. Cort. Peruv. opt. Subtiliter pulv. 3j. Syr. Limon. 9. f. m. f. Electuarium molle, cujus capiant Quantitatem Castanea quaq; Hora ztia vel 412, in Remissionibus, ad Febris Evanescentiam.

Re Sal. Absinth. 3j. Sp. Vitriol. 9j. Aq. Absinth. C. 3ij. Ceras. n. 3j. Menth. 3\u03b3. Syr. Caryoph. q. s. M. f. Mistura pro duabus Vicibus ante Paroxysmum exhibenda. Collius. A. missa A. modernis

Novi Intermittentes Pulo. Flor. Chamomill. ad 38. ter de Die fugatas.

Novi item Febres Intermittentes, quasi Carmine magico, Emplastro Cinnabarino, Ventriculo admoto, Sublatas.

1913300

Species Febris in Paroxysmo consideranda, & Remediis prenominatis sublevanda est.

### PESTIS, FEBRIS PESTILENTIALIS.

- Hâc in Re Authoribus Fides adhibenda est; & siquidem omnes, uno Ore, Diaphoresi consulunt: Hisce solis aggredienda est.
- Quidam Emetica, alii V. Settionem, alii Glandes, quandoq; Cathartica mitia pramittunt; tum Diaphoretica exhibens. N. Hodges dat Sp. C. C. Dij. (3j.) ex Aq. Epidemic.; & Sudoribus promanantibus Cerevisiam vult falviatam affatim dari; & hoc in omni Sudore critico notari velim, ut copiose bibant quamprimum Sudores prorumpunt.
- Sydenham, pramissa Vena Sectione, R. Theriac. Andrem 38. Elect. de Quo Di Pulv. e Chel. Cancror. C.gr. xij. Coccinel. gr. viij. cum Succ. Kermes.
- R. Aq. Card. b. Scordii Comp. a Ziij. Aq. Theriacal. stillat. Zij. Syr. Caryoph. Zj. m. f. Julap. Capiant Bolum 6th quaq; Hora, superbibendo Julap. hujus Cochl. vj.
- Etmullerus, R. Antim. Diaphoret. Flor. Sulph. à 38. Sal. Viperar. Dj. Camph. gr. xv. Sacch. alb. 3j. m. divid. in Chart. No. iij.
- Barbette, Re Extract. Prophylact. 3is. Oc. Canc. 3j. Aq. Prophylact. 3s. Syr. Limon. 3j. Acet. Sambuoin. 3s. m. f. Haustus.

Isb. Diemerbroeck, R. Aq. Theriacal. Ziij. Succ. - Citri ZB. Sal. Card. b. ZB. m. f. Haustus. Vel, Re Acet. 3ij. (iij.) Sal. Commun. 3j. m f. Hau-Aus.

Authores ergo Alexipharmaca pro Febris Modulo. mibi diversificare & specificare videntur.

#### over I and she after bed to me as a Fault, what I have s a svel bank attended Buro. of of early on

un further Mostes of them Quamprimum apparet, Chirurgi Munus est attrahere, maturare, & aperire; tum detergere, incarnare, & cicatrizare; Oleofis, Velicantibufq; Diaebylo, Lancetta, Agyptiaco, Tereb. in Nitell. Ov. Solut. ; Basilico, & Unguento Diagonpholigos. Interim Alexipharmaca, ne retroeat, exhibe.

#### PRINCE IN General THE THE MOUDS CARBUNGE VE TWO IN

Uratur; Crusta Separetur; Ulcus curetur; Caustico potentiali circumillito (Butyro Antimonii;) Bu-tyro recente, Oleo Lini; Ægyptiaco, Bastico, Diapompholigos Unguentis. Alexipbarmaca specifica toto Tempore exhibenda sunt interne.

As for Symptoms that come on after the Eever is quite vanish'd, it would be an endless Task to undertake to shew how to remedy them, there-fore I must refer my Reader to his Leisure to The Symptoms are mild: The Heat gentle, or

force, perceptible: He enus Howly.

Acute Fever

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# CHAP. IX.

# The DIAGNOSTICKS of

### F.E. V. E. R. S.

IT may be ascribed to me as a Fault, that I have no where spoke of the Diagnosticks of Fevers: I own, I have not taken any further Notice of them, than to demonstrate that Fevers are only discriminated by their Degrees, and also to shew the two general Remarks necessary to illustrate the Methods taken in them: I am therefore willing to sketch out the Signs more at large, for the Satisfaction of such Readers as may stand in need of them.

#### FEVERS in General,

Are known by a Quick and Frequent Pulse, Heat, Thirst, and Inquietude: A Horror or Rigor begins it; there is joined a Want of Appetite, a Lassitude, a Discolour'd Tongue, (White, call'd Cancer albus, Black, Brown, &c.) The Pulse has above a Hundred Strokes in one first Minute.

#### An Acute Fever,

Is known by a great Heat and Thirst, a strong, equal, and frequent Pulse. It ends soon.

#### of Total 2id A SLOW FEVER Them I stot

The Symptoms are mild: The Heat gentle, or fcarce perceptible: It ends flowly.

A Fever between an Acute and Slow one, is term'd a Mixt or Middle Fever.

#### An EPHEMERA.

Some evident Cause has preceded: The Urine is like that of Persons in Health (with Contents, viz. and Citrin:) No Rigors, according to fome, precede it: It lasts 24 Hours. But it sometimes lasts many Days without any Remissions. We may guess it to be an Ephemera if the Patients were not fickly before, and if it begins by some External Injury.

#### A SYNOCHUS IMPUTRIS.

It has a quick Pulse and Heat, and the Urine is réd, and has a copious Sediment: It lasts 7 Days without Remission. Sydenham's Febris Variolosa 1667, which he fays was rather an Inflammation of the Blood than any Humour which wanted to be expell'd, could be no other than this Imputrid Synochus.

#### A PUTRID SYNOCHUS.

Has all the fame Symptoms which an Imputrid one has, only this is more violent. It acquires various Names, according to the various Symptoms; 'tis call'd an Assodes, when a Pain of the Stomach accompanies, with a Tenfion of the Hypochondres; Elodes, when symptomatical Sweats infest us; Epiala, where the Persons complaining of Cold, are Hot; Syncopalis, when the Decumbents are troubled with Faintness; Rheumatica, Pleuritica, Anginofa, Erysepelatofa, Dysenterica, &c. where 'tis accompany'd by these Symptoms. It has Remisfions. with violet Med acts and Carlingal

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#### A SYNOCHOS, or Continual Fever,

Is a Mailgnant Fever: And though both Ardent Fevers and Hellical ones be Malignant, yet the latter is most commonly term'd so. The Heat, Pulse, Thirst, and all the Symptoms continue without Remissions, 'fill it terminates by a Criss. The main Complaint is, a great Dejection and Prostration of Strength, a weak Pulse, and an unequal one; dangerous Symptoms of the Nerves supervene soon after the Seizure, with cold Sweats, dry Tongues, Black Thrushes, Watchings, Deliria, Water pale or undigested; and many more bad Symptoms.

## A PESTILENTIAL FEVER.

Is a Fever with Spots (whether Morbillose or Petechial) with a Pulsus Myurus, formicans, and an imperceptible Heat. They often die, though the the Urine appear concocted (though in many there is the \*\*epuvodns Hypostalis\*, and in others the \*\*epv avarelagas poor, according to Willichius; and I have o'bserv'd them.)

#### The PESTIS.

Besides the Urine mentioned in the Pestilential Fever, there is small Heat, a formicant and intermitting Pulse, not frequent; with great Syncope's and Languors, Buboes, Carbuncles, black Spots, great Mortality, and very sudden Death.

#### The Hungarian Fever, (or, The Camp-Fever.)

A Fever with violent Head-achs and Cardialgia's, Languor, Nauseousness, Hiccups, and Pain.

The

#### The HERPETICAL FEVER.

From a Fever join'd with a Herpes Miliaris,

#### The MILIARY FEVER. The RASH. COM-POUND MILIARY FEVER.

The Simple Miliary Fever is known by a Fever, and watry Blifters breaking out about the Eleventh Day after the Seizure. This is the Crystalli of the

The Rash or Rubeola, are a Fever with Cough and fome thort Breathings, and then red Tubercles breaking out. Delbort lenev.

The Compound Miliary Fever, is when a Fever feizes, with velicated Eruptions, join'd with the Rubeola, Small-Pox, Mealles, or Petechia.

Sir D. Hamilton adds to his Tract, that it is obfervable that these Fevers are discoverable by a Languor, an Oppression at the Breast, and Sighings; which indeed are Symptoms common to all Eruptive Fevers, and observ'd by Authors.

#### The SCORBUTICK FEVER.

Is a Fever, of what fort foever, accompany'd with Scorbutick Eruptions,

#### The CRAPULAR FEVER.

This Fever is often accompany'd with Lurid Eruptions appearing the 7th or 9th Day.

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#### PARTICULAR FEVERS.

Ballonius L. de Virgin. & Mulier. Morb. C. 7. calls fome Fevers Cephalick, Hepatick, Stomachick, Lienose, &c. and we often see Pleuritick, Anginose, and such Fevers seizing on a Part. These Sorts of Fevers are never Intermitting, but Continual, says Forestus, if they be Symptomatical only.

# A FEVER on the Spirits, (SYNCOPAL FEVERS, CARDIACA PASSIO.)

They are only Malignant Fevers, join'd with a Despondency.

#### The LACTEAL FEVER,

Is a Fever coming on the Third Day after Labour, from the Milk in the Blood: There is a Horror goes before it, if it turn into a Synochus putrida: The Breasts swell: They are pain'd in their Backs and are Restless.

#### The PUERPERAL FEVER.

The common Symptoms of a Fever forerun: They have Pains in the Abdomen, Hypogastria and Loins. I suspect it to be Instammatory mostly. Tis from the Lochia suppress'd.

### A Colliquative Fever,

Is a Fever attended with Sweats, Diarrhaa's, or fome fort of Evacuations.

#### The WORM-FEVER.

Is a Fever rais'd by the Seminium of the Worms in the Intestines, and is judg'd to be such, by Verminous Symptoms with a Fever.

#### The DIÆTETICK FEVER,

Is only a Fever occasion'd by playing the Gour-

#### A CATARRHAL FEVER.

It happens from catching Cold; and is a Cough with a Fever coming on after it; where are finall Shiverings, with Heat and Cold succeeding each other; a Heaviness of the Head, as in wet Weather, red Eyes, a Noise in the Ears, a Stoppage of the Nose, Hoarseness, and all other Symptoms of a Cold. It may be called a Feverish Catarrh or a Lymphatick Fever.

#### A FEBRIS LENTA,

Is a Symptomatical Fever produc'd from some Ulcer in the Lungs, or elsewhere. This has three Degrees, according to the Ancients.

#### A HECTICK,

Is discoverable from a constant though gentle Heat (encreasing after Meat,) a frequent Pulse, and an Atrophy. The Heat is mostly perceptible in the Palms and Soles: The Pulse is, according to Floyer, 100 out of the Fit, and 120 in the Fit: The Atrophy is from the Colliquation, by Sweats, Diarrhewa's, &c.

A Hy-

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#### A HYSTERICK FEVER,

Is a Fever with Hyflerick Symptoms. The fame is to be faid of Hypochondriack ones.

#### An ERRATICK FEVER,

Is a Fever that observes no certain Order nor manner of Invasion: sometimes it seizes with Rigors; sometimes with Sweats, at other times with neither; sometimes with Vomitings, at other times without 'em: Tis call'd Erratick, because it wanders in Variety, so as neither to keep any stated Time nor Order in its Accessions or Remissions. Tis never Continual, but Periodical, says Forestus.

### The SMALL-Pox. The Distinct Species

From a Pain in the Head and Back, weeping Eyes, Vornitings, Coughs, and Fever; one or two Pustules break out in the Apparatus. The 3d Day the Pustules break out red, rough, and very small, and daily grow bigger 'till the 4th and 5th Day, by rising higher, growing broader, and inflaming. The 6th Day they begin to ripen. The 9th Day they scab and fall off gradually.

#### The Coherent Kind.

They run together in two or three Places in the Face. They appear the 3d Day: And fall off the 14th Day. They Salivate.

#### The FLUX KIND.

Their Numbers are so great, that they tise very little in the Face. The 8th Day they ripen, and

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are first White, then Yellowish, and lastly Black: The Fever is Continual, through all the Stages of them. They fall off the 17th or 20th. The 3d Day they appear: The 11th, the Salivation lesses 'till the 13th, when it stops, and the Face falls.

#### The MEASLES and SCARLET FEVERS.

They differ as the Diffinct and Flux-Pox.

Over and above the common Signs of Fevers, they Breathe short, have an Oppression of the Hypochondres, they Cough, and Sneeze. On the 4th Day, or 5th, a Redness seizes the Scarss-skin, which is of no certain Figure. The 6th Day they grow rough. The 8th they scale, and then vanish.

#### In the SCARLET.

They appear later: The Skin is as if it were dyed with Claret; they scale in great Flakes; and the Fever is often Continual.

#### INTERMITTING FEVERS,

Is when every Day, every other Day, or every fourth Day, there is an Amueria. But Chefneau having mark'd 'em after a peculiar Manner, I shall take the same Liberty with all of them; which will spare me some Words.

A Quotidian iij.
A Tertian iij.
A Quartan iiij.
A

A Quintan innj. A Sextan innj. A Novan inninj.

ADouble Tertian iiii.then

A Doub. Quintan iiniinij,



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A Semi-tertian is compounded of a Quotidian, Continual, and an Intermitting Tertian: So that one Day they have Vomitings, &c. The next Day (or the Well-day, as it is commonly term'd,) they only have the Simple Fever.

A Bastard Tertian is only a Protraction of the Fits.

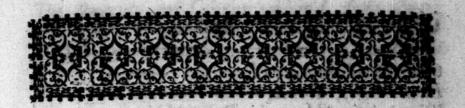
I'm afraid I have by this Time fufficiently tir'd my Reader, and shall only add, That having rang'd the Prognosticks of all Diseases into such a particular Order, that they can't easily be dismember'd, I could not insert them here; I must therefore crave the Reader's Excuse 'till my Leisure will allow me to publish that Piece.

side of the said shall not be a superior of the



Their Mumbers are i





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